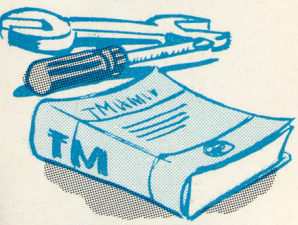
Issue 154
PS
1965 Series
THE PREVENTIVE MAINTENANCE MONTHLY
WHO DIDN'T CHECK OUT THESE PARTS BEFORE TAKING THEM OFF THE EQUIPMENT???
DO YOU DO IT?
(See page 29)
PARTS FOR REPAIR
Will Eisner

There's a big push on nowadays to chop down the cost of running the Army.

You have a big part in that job. The way you operate and use your equipment and the way you maintain it all play a part in this cost-reduction business.



Operate your gear like it should be . . . no banging and slamming. Keep it clean, adjusted, lubed and perking just right. It'll last longer . . . and won't have to be replaced by a new one so soon. Saves $$.

Get your unit mechanic in for the tough jobs. He has the know-how, tools and parts to keep your gear purring. When the job's too big for him, he gets the support maintenance outfit rung in to keep you moving, shooting and communicating.

If you're a mechanic, one of the biggest bets for keeping down the tab is using your test equipment to check for bum parts. Use the low-voltage circuit tester on your trucks and tanks, for example, or tube testers on radios. Know, for sure, before you yank a part and replace it with a new one. Saves $$.

Supply men, too, know what to do: Get and stock only what your unit needs: No rat-holing for "just in case they're out." No "nice to have." Remember that when the whistle blows, you go with what you've got — including parts and supplies. You don't want more than you can carry. Saves $$.

Also, cut out "spit-and-polish" and whitewashing the rocks. Saves $$.

Do something today to help cut costs. And every day.

Your buddies can do the same, and it'll really stack up big for Uncle.

Try it. It's great for helping keep your outfit combat ready.

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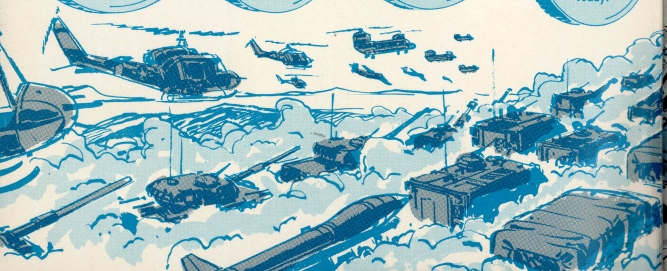
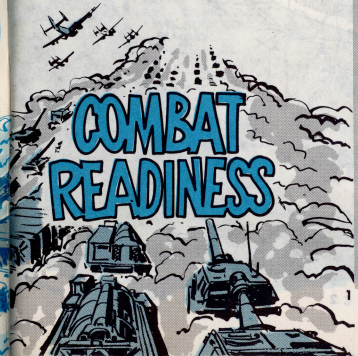


C$T REDUCTION + GOOD PM ⇊

COMBAT READINESS



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THE PREVENTIVE MAINTENANCE MONTHLY
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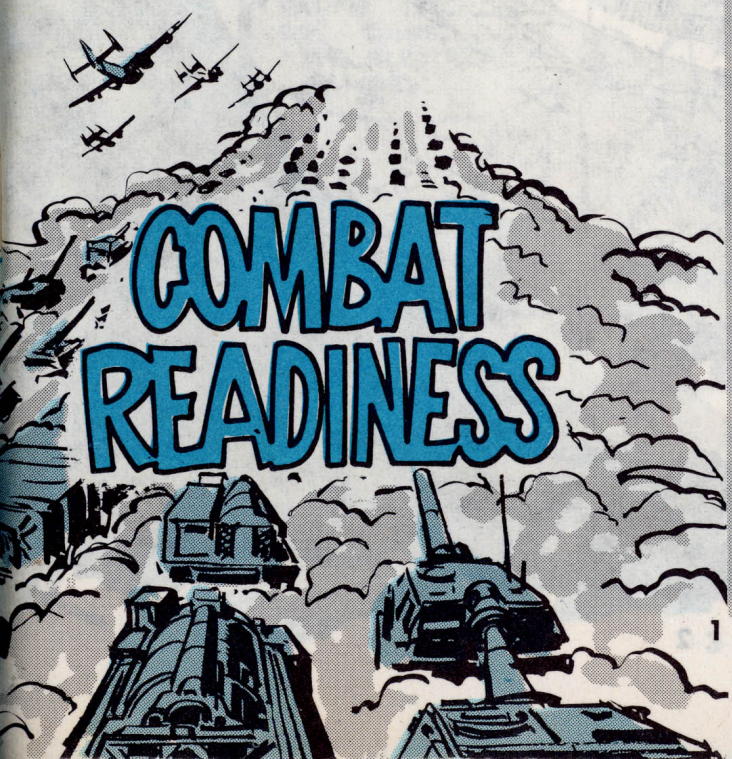
C$ST REDUCTION + GOOD PM = COMBAT READINESS



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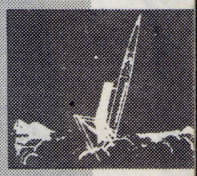

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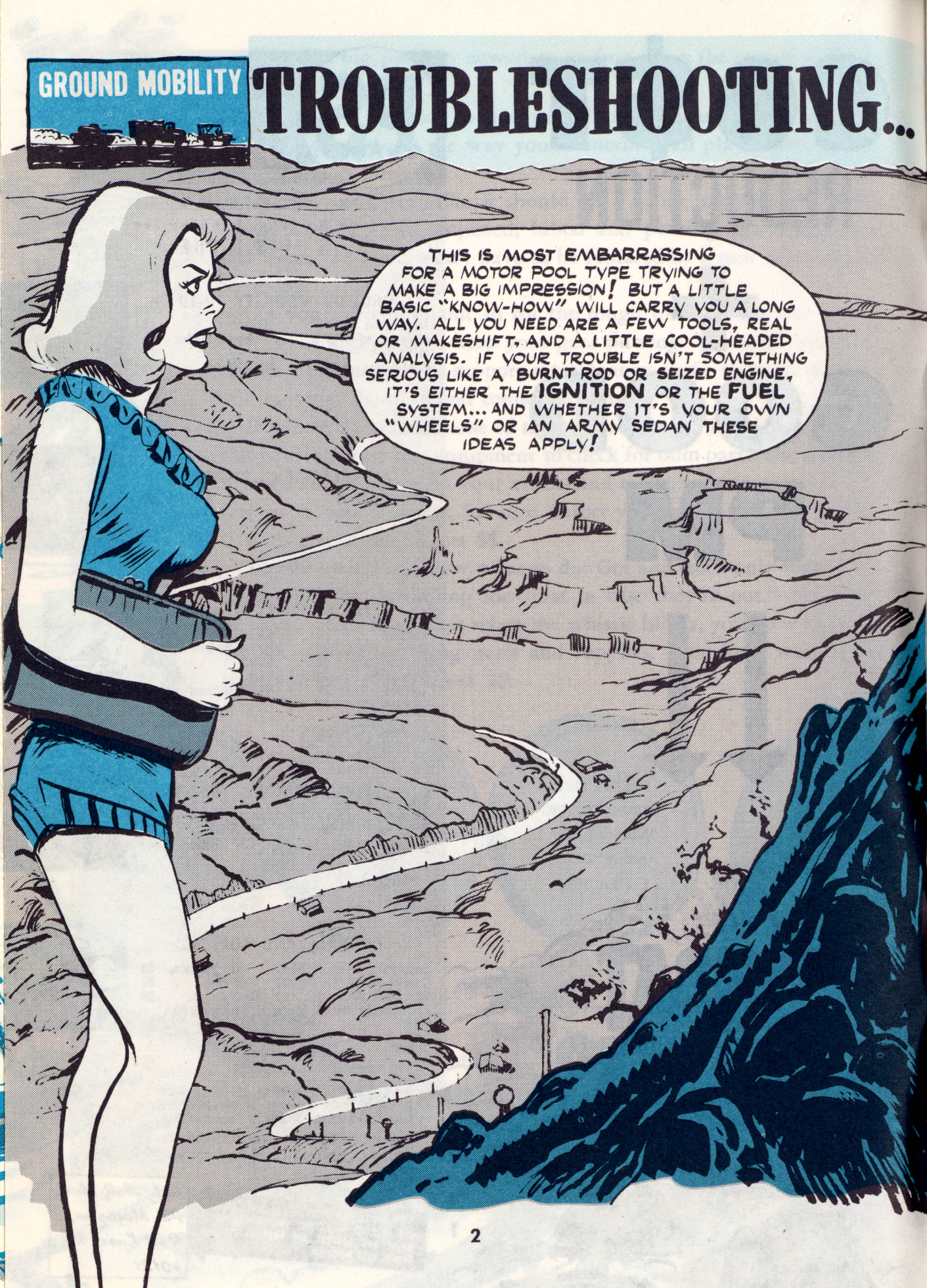
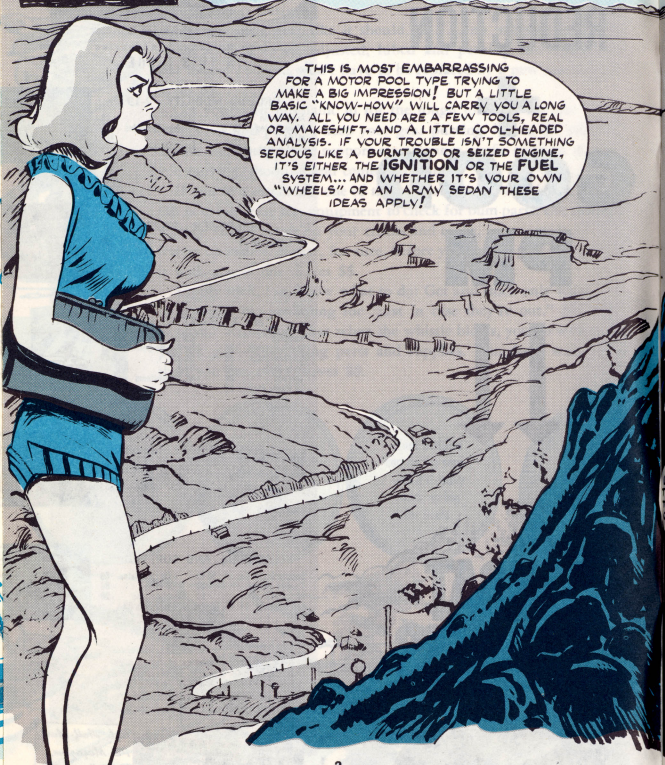
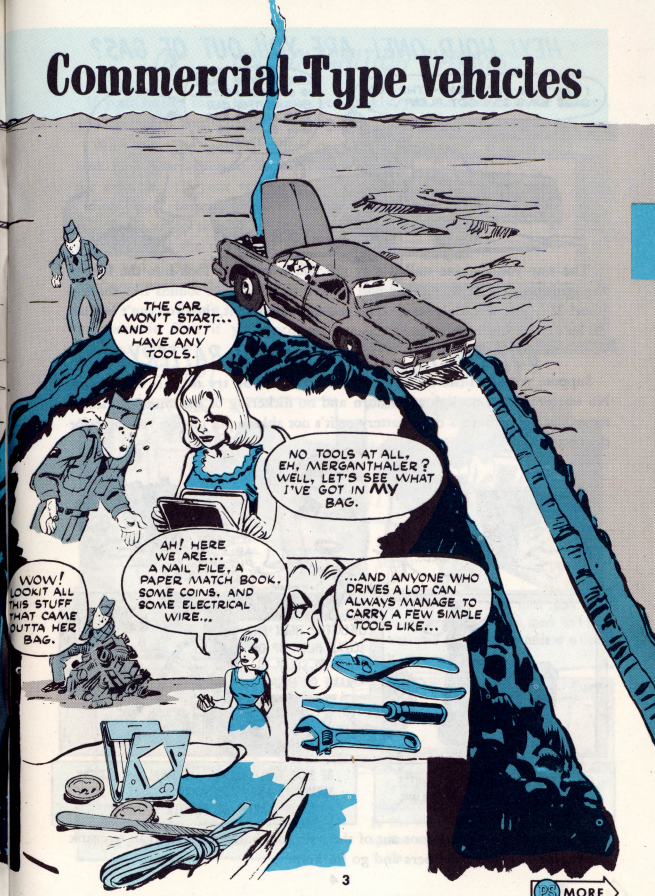

GROUND MOBILITY
TROUBLESHOOTING...
THIS IS MOST EMBARRASSING FOR A MOTOR POOL TYPE TRYING TO MAKE A BIG IMPRESSION! BUT A LITTLE BASIC "KNOW-HOW" WILL CARRY YOU A LONG WAY. ALL YOU NEED ARE A FEW TOOLS, REAL OR MAKESHIFT, AND A LITTLE COOL-HEADED ANALYSIS. IF YOUR TROUBLE ISN'T SOMETHING SERIOUS LIKE A BURNT ROD OR SEIZED ENGINE, IT'S EITHER THE IGNITION OR THE FUEL SYSTEM... AND WHETHER IT'S YOUR OWN "WHEELS" OR AN ARMY SEDAN THESE IDEAS APPLY!

GROUND MOBILITY

TROUBLESHOOTING...



Commercial-Type Vehicles



MORE

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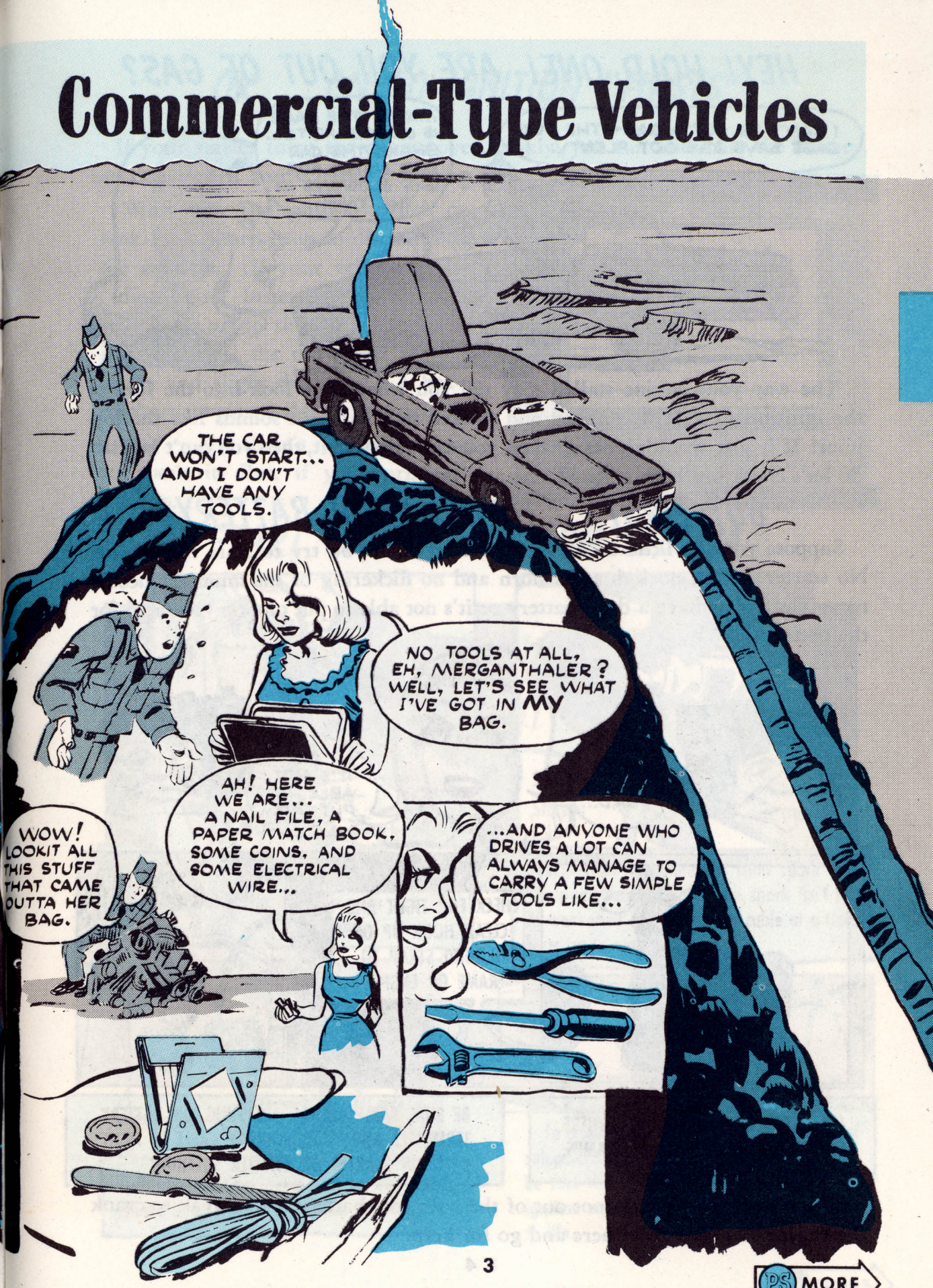
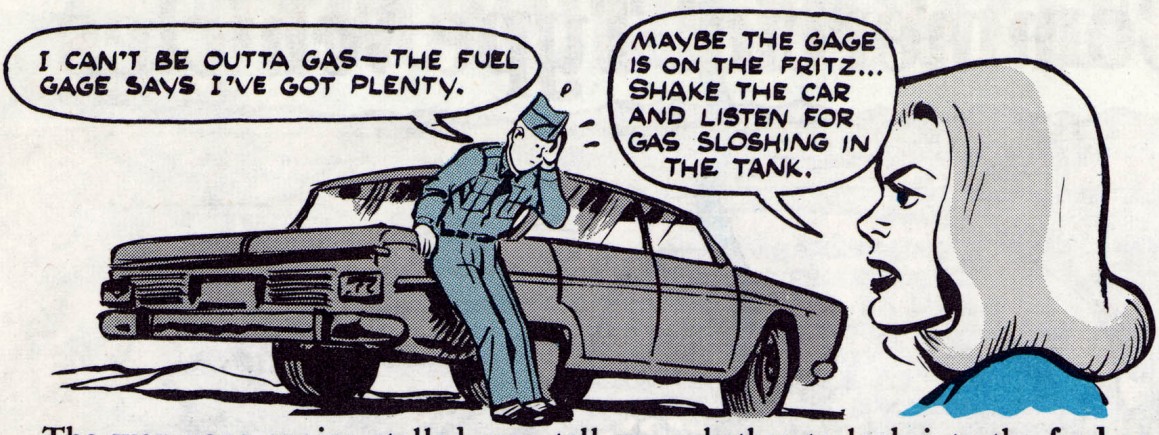


P.S. MORE

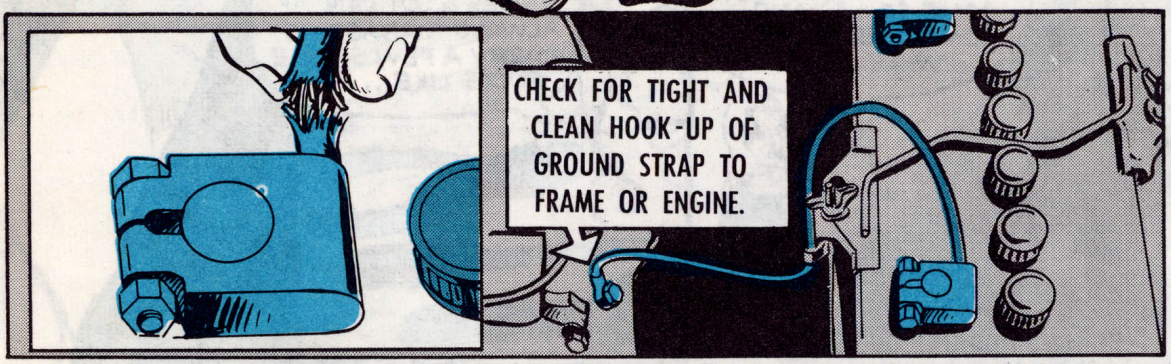
HEY! HOLD ONE! ARE YOU OUT OF GAS?



The way your engine stalled may tell you whether to look into the **fuel** or the **ignition** first. If it coughed and choked to a halt . . . sounds like the joy-juice! If it just wouldn't start when you came back to it, then you can't be sure. So let's check out both systems, one at a time.

BUT FIRST . . . HOW'S YOUR BATTERY?

Suppose you get little or no signs of life when you try to start the engine. No starter action, no lights, no horn and no flickering of the ammeter needle mean you either have a dead battery or it's not able to put out. So you head for the battery . . .



CHECK FOR BROKEN STRANDS WHERE CABLE GOES INTO TERMINAL CLAMPS.

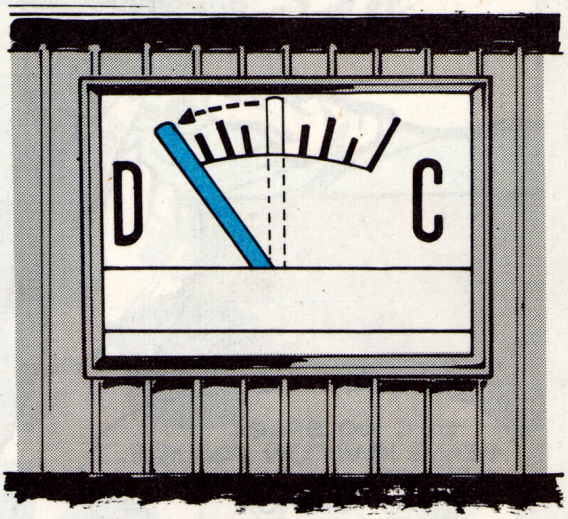
BE SURE CABLE CLAMPS ARE SNUG ON BATTERY TERMINALS AND THAT POSITIVE CABLE IS TIGHT ON STARTER OR STARTER SOLENOID

If you get a very weak toot out of the horn, the battery is too weak to crank the engine . . . stop right here and go for help.

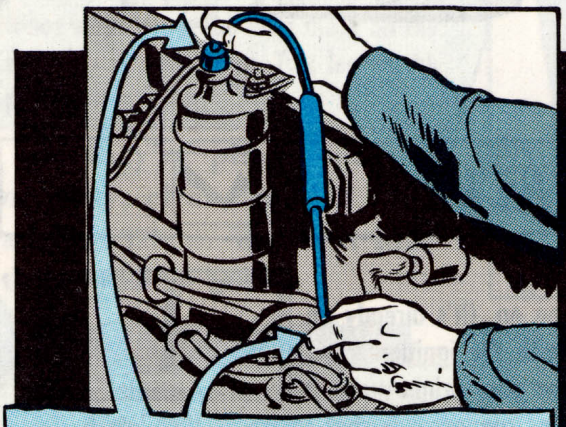
OK . . . ON TO IGNITION "FIRSTS"

If your starter turns the engine over briskly, you can eliminate the battery, ignition switch and starter as suspects.

With only the ignition switch on, look for a sharp drop to discharge on the ammeter. (If your vehicle has an "idiot light" instead of ammeter, it will light up to show discharge, but it doesn't tell the difference between heavy and slight discharge.) A heavy discharge means a short in the primary circuit — and there's nothing you can do about it. But, if your primary's okay . . .



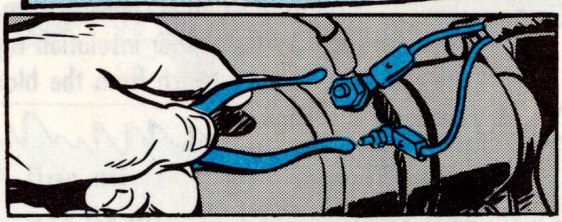
START ON THE IGNITION SYSTEM



See that the coil-to-distributor cap wire is firmly seated in the socket at each end. This often turns out to be the trouble.

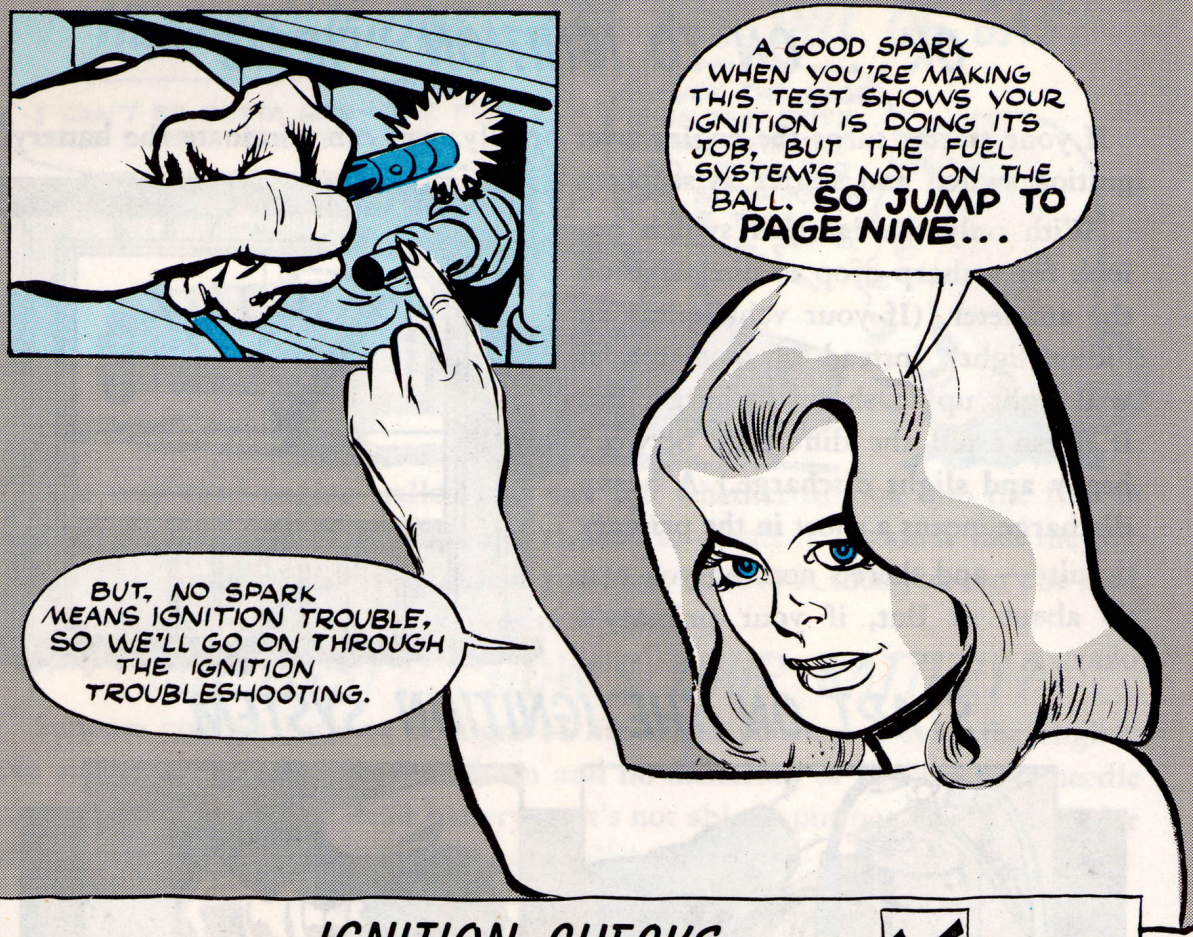
Wipe dirt and moisture from spark plug porcelain base to make sure spark isn't lost or weakened — remove one cable at a time. Now try to start again.

While cranking engine a healthy spark should jump from plug wire to the block .



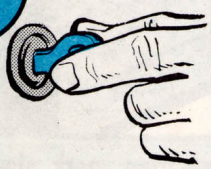
To crank engine, you can bridge the starter solenoid contacts with the handles of a pliers. Be sure the gear shift is in neutral — if the ignition switch is "on" your wheel may come to life.

P.S MORE

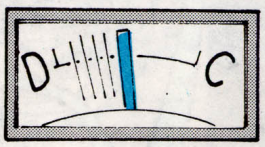


IGNITION CHECKS

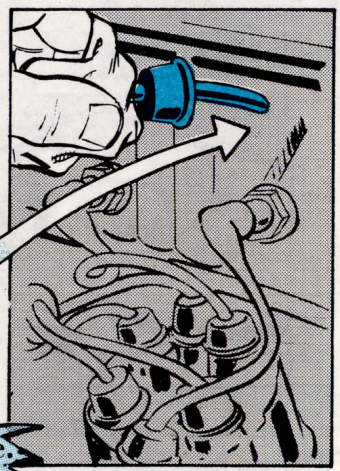
1.



Hit the starter with the ignition on. (It's already on when your starter operates with the ignition key.) A flicker on the ammeter shows your primary circuit is okay — unless the distributor condenser is shot (more on that later).



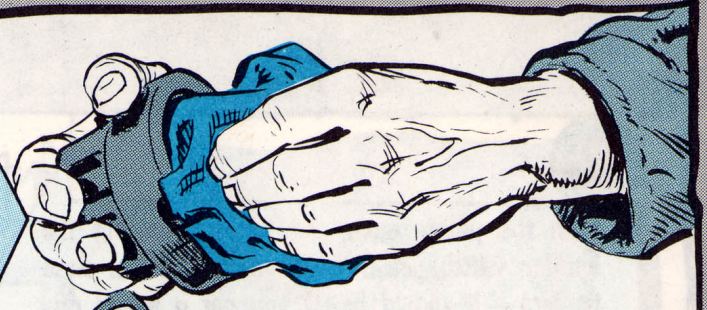
2. Go back to where you were testing for a spark with the sparkplug wire. If there's no spark at the plug cable, make the same kind of test this time by pulling the coil-to-distributor cap wire from the cap. Hold the cable by the rubber insulation then bring the metal tip about 1/4-inch from the block while cranking the engine.



A spark here shows that the coil is OK but something's wrong in the distributor, keeping the juice from the spark plugs. Could be the rotor's gone bad or the cap is cracked, letting moisture inside.

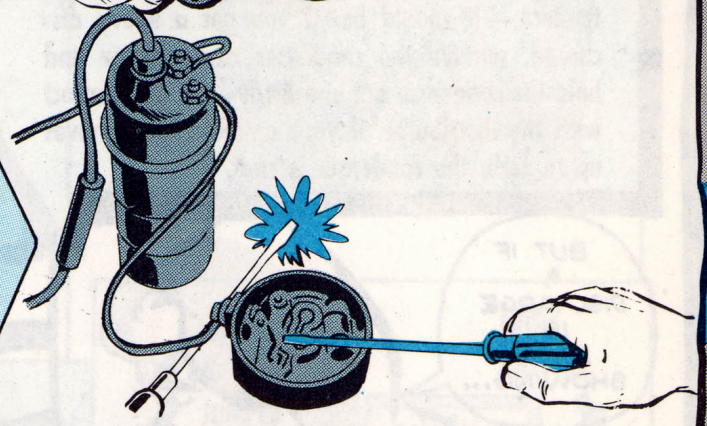
3.

Wipe the inside of the distributor cap clean and dry. Condensation, in damp country or wet weather, can form inside and foul up the electrical operation.



4.

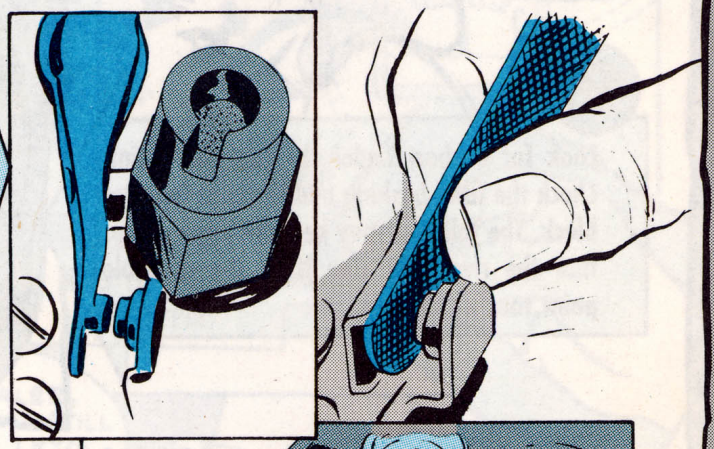
Hold the distributor points open while shorting out the coil-to-distributor wire (not the distributor cap wire) from the distributor connection to the block. If you get a spark at the block . . .



5.

Examine the points. Tickle the starter until the high point on one of the cam lobes stops under the fiber block on the movable ignition point. This leaves the points wide open.

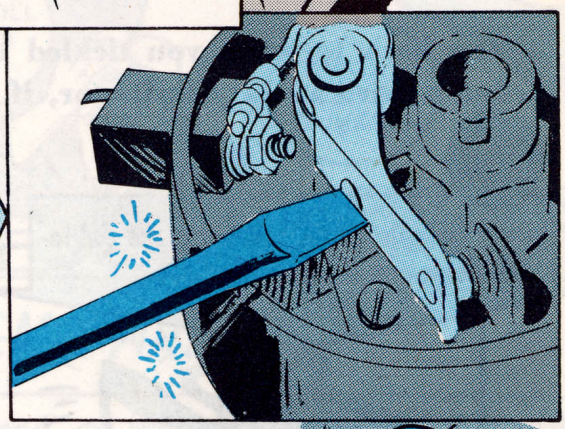
If they're pitted, burned or dirty, clean 'em off with a small file or the next best thing you've got.



6.

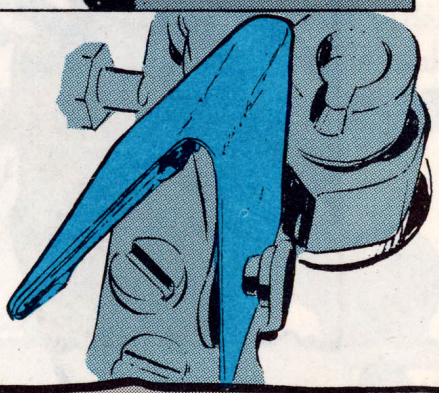
Ground the moving ignition point. If you don't get a spark, make sure the connection's tight where the movable point's tension spring and the condenser's pigtail attach to the distributor's primary terminal.

Now, if you get a spark . . .



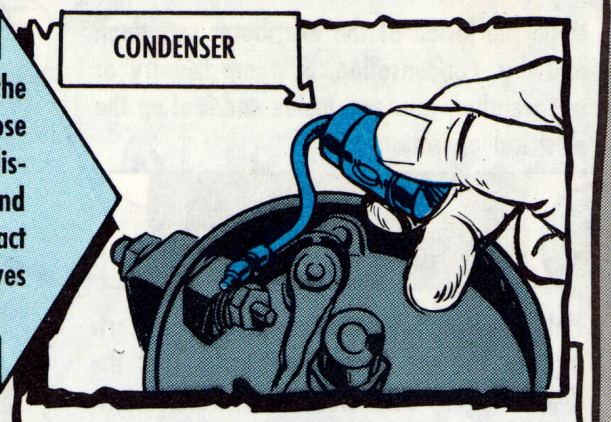
7.

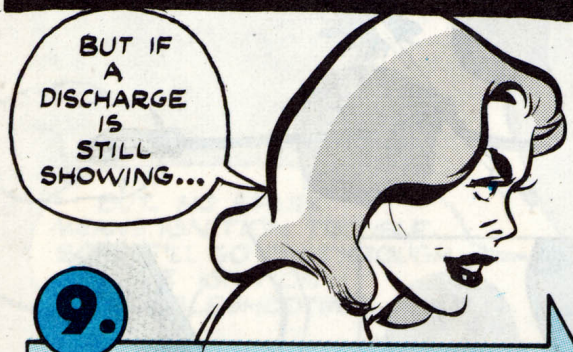
Make sure the points are opening about .020 inch. A matchbook cover's thickness is about right. The adjusting screw holding the stationary point sometimes loosens and allows the gap to change.



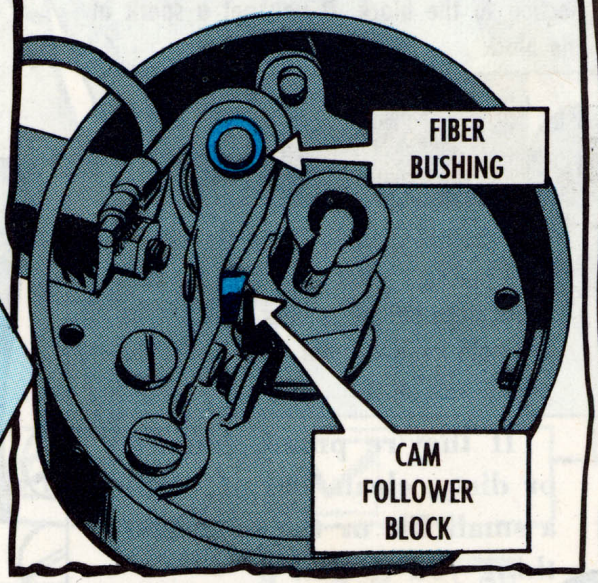
PS MORE

8. With the points open and nothing on but the ignition switch, see if the ammeter is on or close to zero — it should be. If you get a heavy discharge, remove the condenser clamp screw and hold the condenser out and away from any contact with the distributor. If your ammeter now moves up to zero, the condenser is shot.



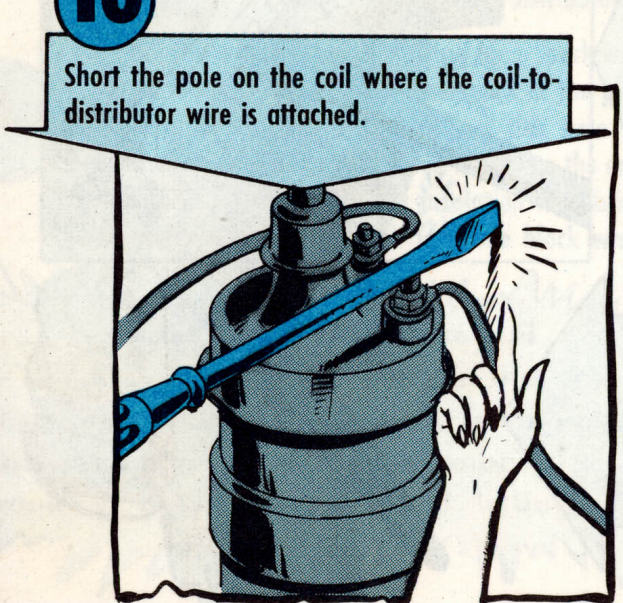


9. Look for a short under the movable point. Check the fiber bushing and the cam follower block. The follower may be worn down so far that the rivet fastening it to the movable point touches the cam.

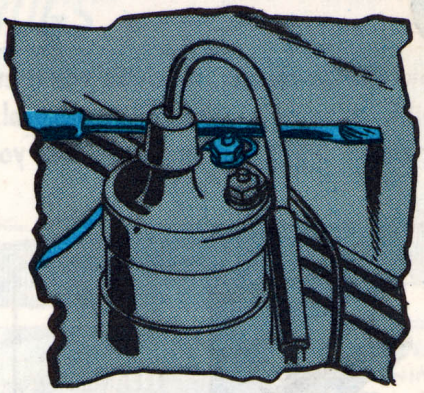


Going back to when you tickled the points while shorting the coil-to-distributor wire at the distributor, if you didn't get a spark . . .

10 Short the pole on the coil where the coil-to-distributor wire is attached.

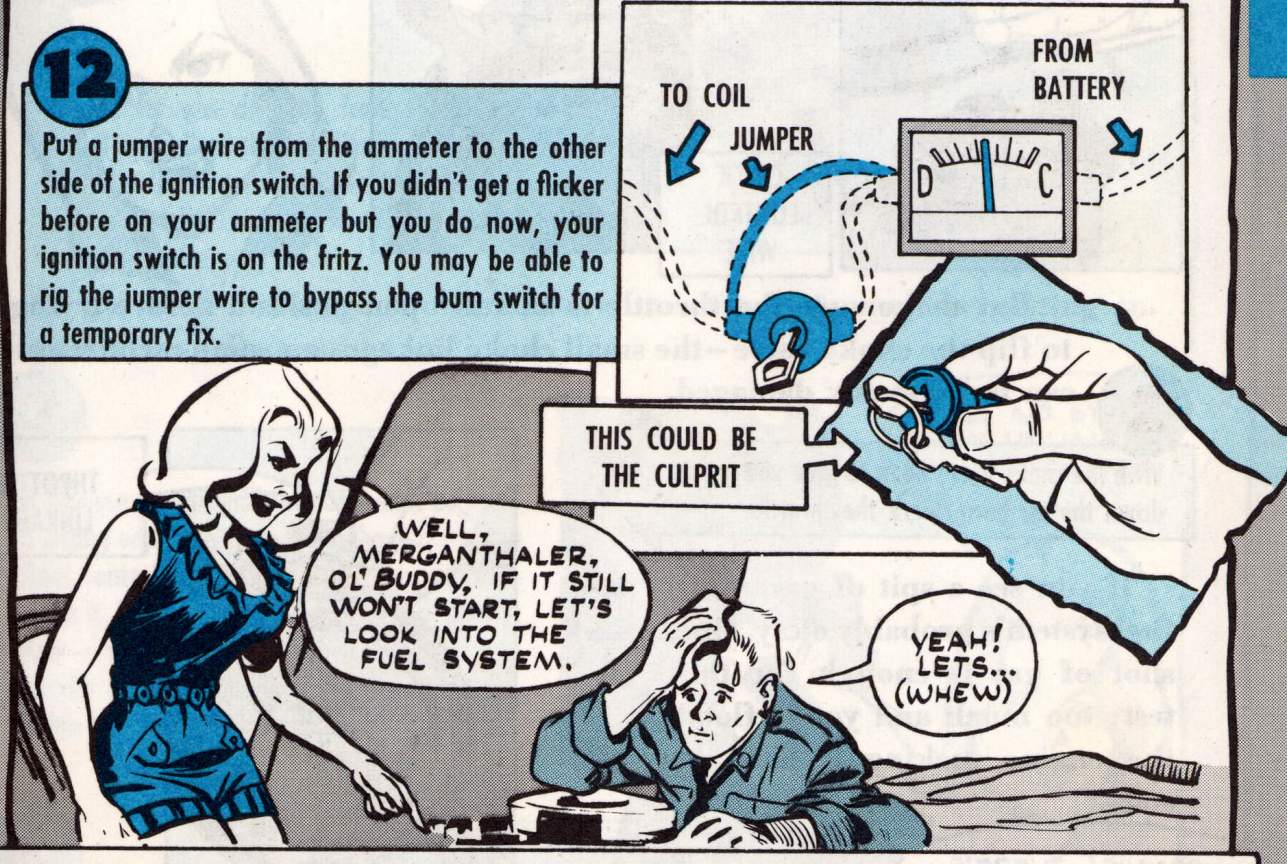


11 Ground the coil-to-ignition switch wire at the coil.



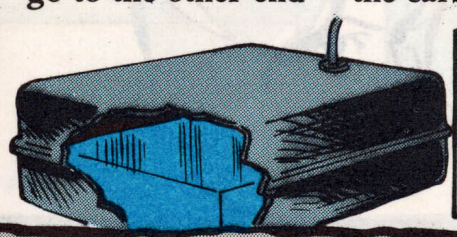
A spark here tells you the coil's done in—and no travelin' on that coil. But if the coil's okay . . .

12 Put a jumper wire from the ammeter to the other side of the ignition switch. If you didn't get a flicker before on your ammeter but you do now, your ignition switch is on the fritz. You may be able to rig the jumper wire to bypass the bum switch for a temporary fix.



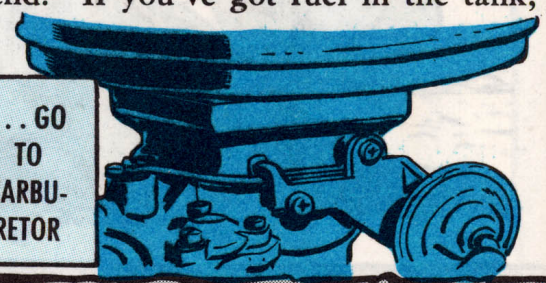
FUEL SYSTEM "FIRSTS"

You check the "beginning" and "end" of your fuel system, in that order. Then, if necessary, trace back from the "end." If you've got fuel in the tank, go to the other end—the carburetor . . .



FUEL IN TANK?

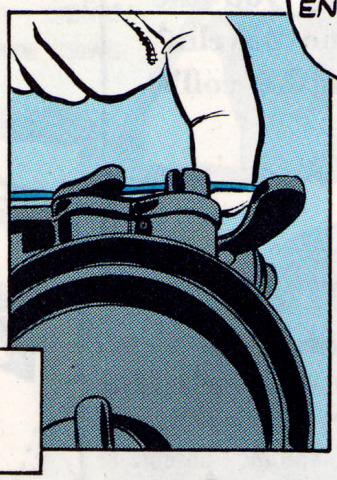
. . . GO TO CARBU-RETOR

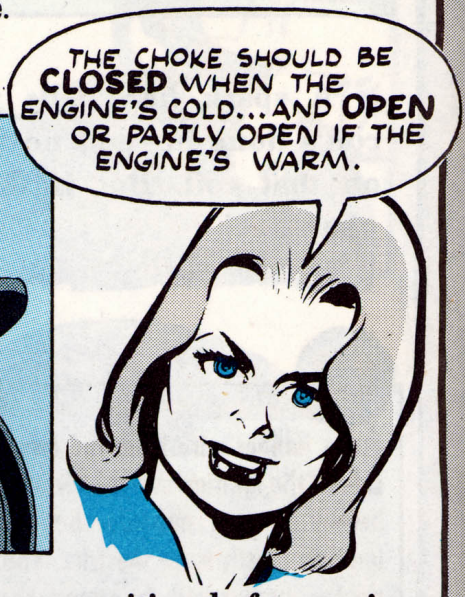


PS MORE

1

Remove the air cleaner. If you've got a manual choke, make sure the butterfly valve opens and closes smoothly as you push and pull the control. See that the control wire is attached tight. If it's an automatic choke, flip it back and forth with your finger to show it's free.

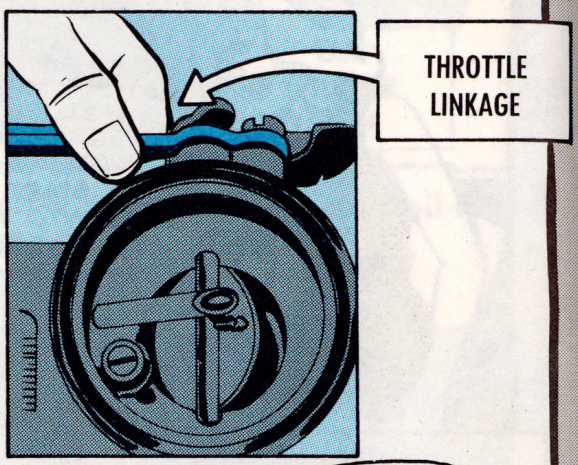




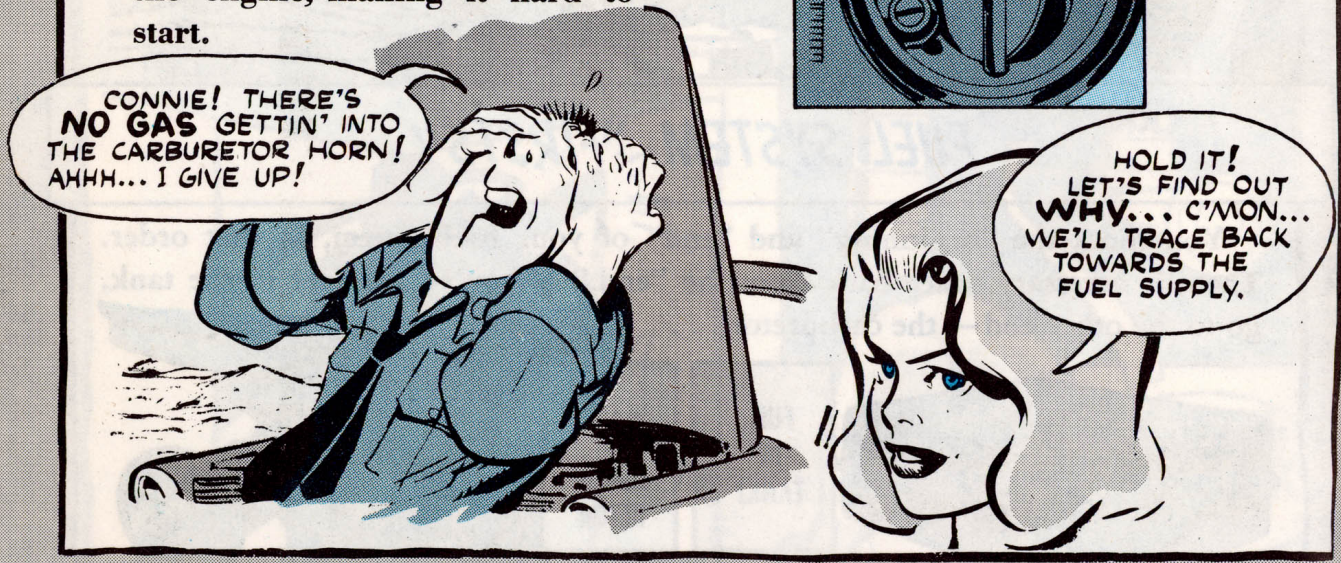
But make sure the throttle is in full open position before trying to flip the choke valve—the small choke linkages on some carburetors can be seriously damaged.

2

With the choke valve open to give you a view down the air horn, work the throttle.



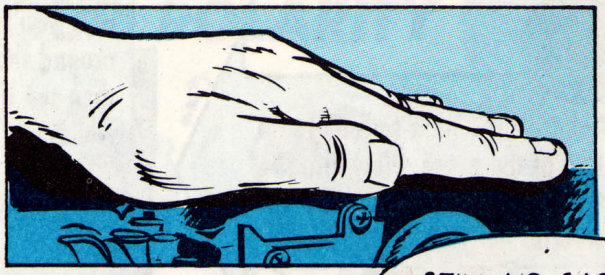
If you see a spit of gas, your fuel system's probably okay. One shot of gas is enough for this test; too much and you'll flood the engine, making it hard to start.



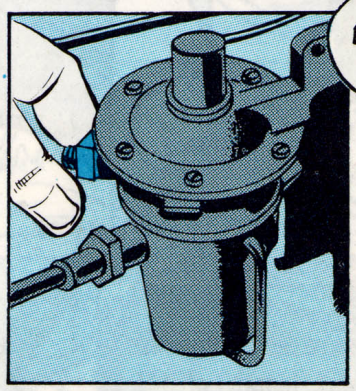
FUEL SYSTEM "BUGS"

1

Hold your hand flat on the air horn while cranking the engine. This'll put a strong suction on the fuel system and may pull through a bit of dirt clogging the works.



If you feel any gas on your hand or if the engine starts, pull your hand off quick.



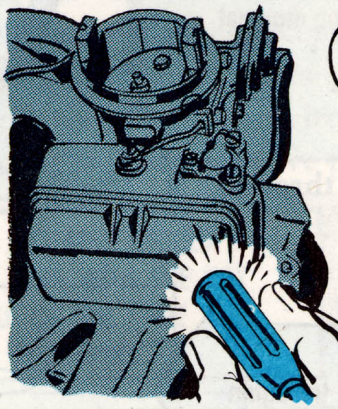
2

Look for gas dripping from the carburetor and eyeball all the fuel line connections back to the line running to the tank. Make sure they're tight. This goes for the sediment bowl on the fuel pump, too.

If gas isn't leaking out of a loose connection, air may be getting in. Either one spells trouble.

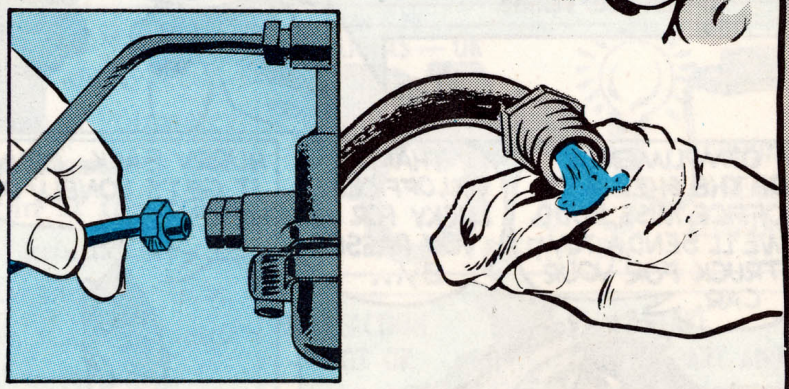
3

If you see gas around the carburetor or smell a strong odor of gas, you may have a sticking float control needle valve and may be able to fix it. Tap on the float bowl area — gently, now — with a small hammer, screwdriver handle or even a small stone. This may dislodge the dirt and free the needle valve.



4

Unhook the carburetor-to-fuel pump line at the carburetor and goose the starter with the ignition off.

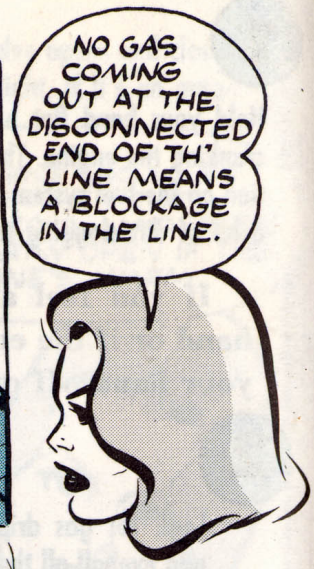


If you get a good spurt of fuel, the trouble's in the carburetor's guts — a job for your direct support.

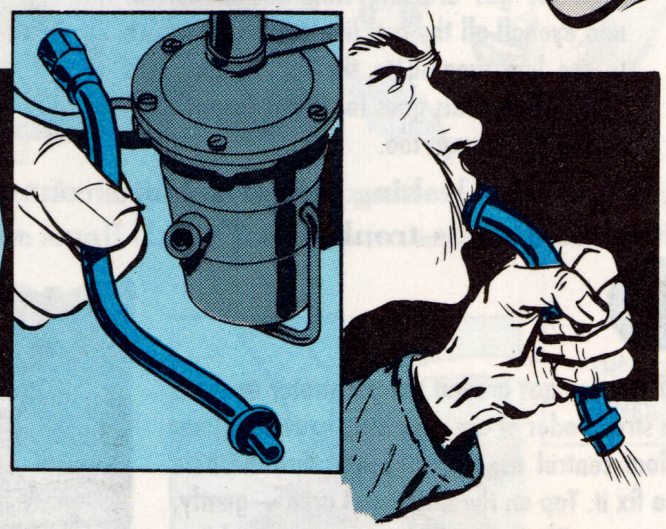
P.S. MORE

But if you don't get gas at this point either, hook it back up and . . .

5. Take off the tank-to-fuel pump line at the pump. Blow into the tank filler opening to put pressure on the fuel.

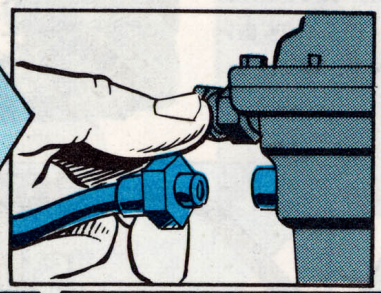


6. Remove the short length of flexible line that connects the fuel pump to the fixed line on the chassis. If the obstruction is in this section, blowing may get it out.

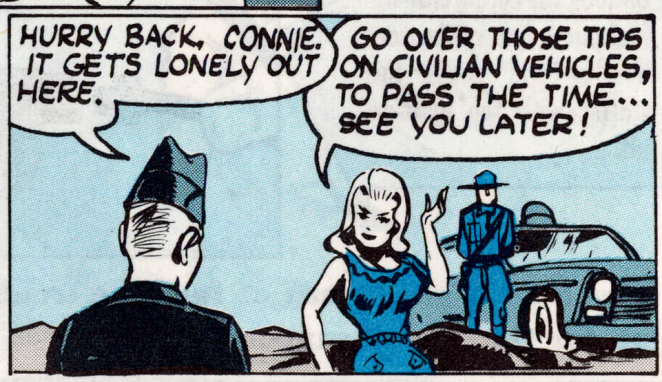


If you finally get gas through to your fuel pump . . .

7. Replace the lines and try again to start your vehicle.



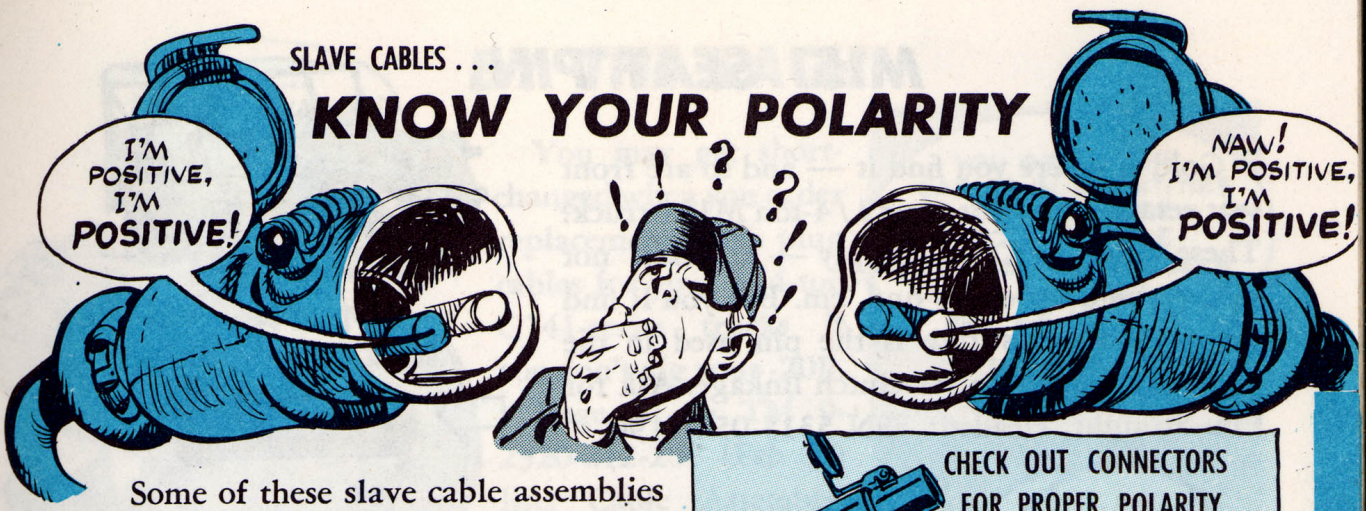
If it's still no-go, you're stuck with a bad fuel pump—and it'll take a mechanic to get your vehicle rollin' again.

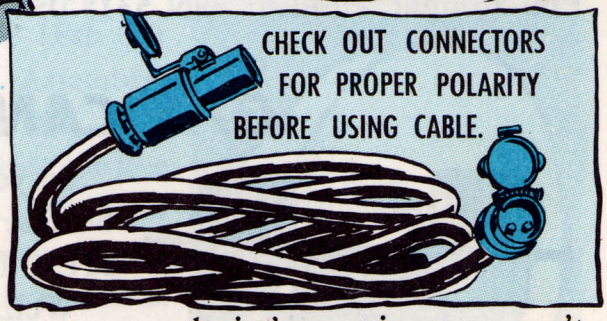


PS END

SLAVE CABLES . . .

KNOW YOUR POLARITY

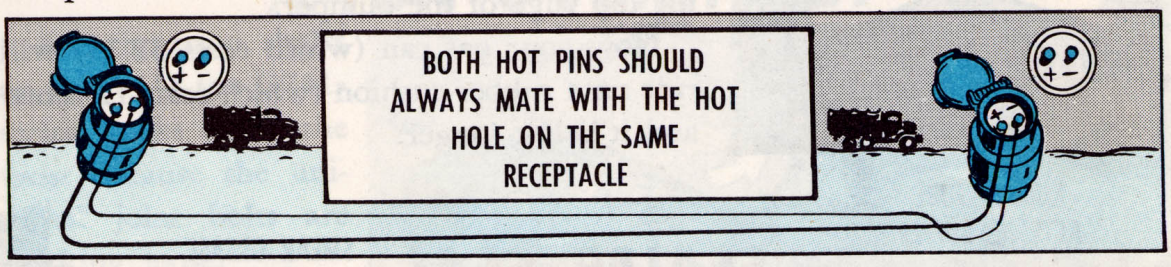




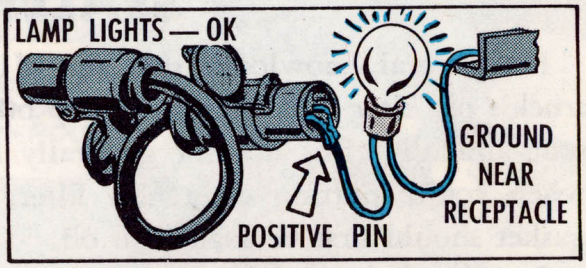
Some of these slave cable assemblies seem to end up with end connectors installed one of two ways . . . right or wrong. So when you go to use one, it's anybody's guess which pin's positive—or negative—or . . .

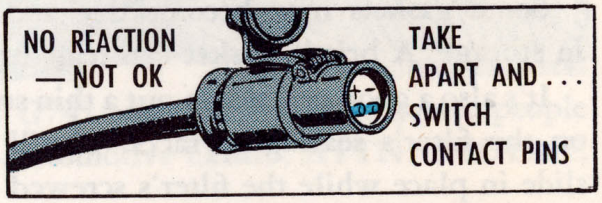
Anyway, if you don't know which way your polarity's running, you can't swear to it that your cable does **not** have crossed wires. So the next time you connect up this cable to a dead vehicle's slave receptacle, you're taking a chance on belting the heck out of that vehicle's electrical system by reversing its polarity. This practice also causes arcing at the receptacle.

The positive pins in both plugs should mate with the positive hole in the same receptacle. If the cable is wired correctly, the same wire will connect both positive pins . . . the other wire will connect both negative pins.



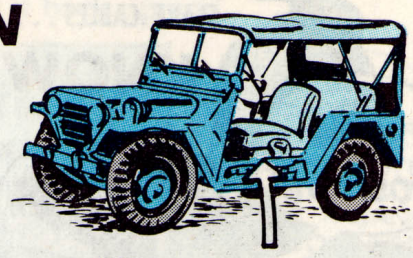
To be sure the cable wiring is correct, plug in one end to a hot slave receptacle. Then use a test lamp or voltmeter to read current flow by clamping one wire on the positive pin at the other end of the cable and grounding the other test wire on the same vehicle. If the lamp lights, or the voltmeter registers current, you're straight.





If you get no reaction, take one connector apart. Then pull out the contact pins and switch 'em.

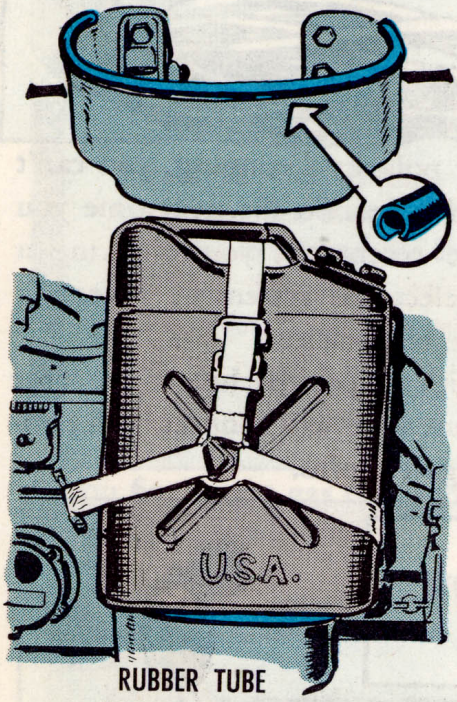
M151 SEAT PIN



NOT TIGHT —
BUT A GOOD SUB

Gold is where you find it — and so are front seat retainer pins for your 1/4-ton M151 truck. These pins aren't in supply — at least, not where you'd expect to find 'em. But you'll find that a good substitute is the pin used in the 1/4-ton M38A1 truck's clutch linkage. Ask for Pin, Straight, Headed: FSN 5315-054-4190.

GAS CAN GUARD



RUBBER TUBE
ACTS AS BUFFER

So your five-gallon gas can gets dented up because it bounces on the left bumper of your M151 1/4-ton truck?

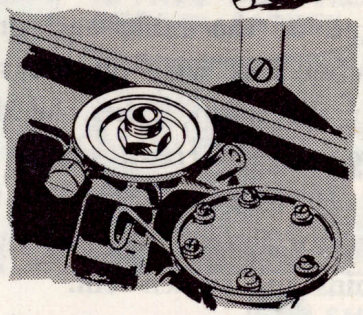
Well, that's easy to cure. All you need is a couple feet of rubber tubing. Tube, rubber: compounded, ID 7/32-in, is listed as Item 2 on page 65 of your TM 9-2320-218-20P (Dec 63). You order it by the foot as FSN 4720-203-2668. It only costs six cents a foot.

Make a continuous slit along the tubing with a sharp knife and then press it in place along the top edge of the bumper.

Now your gas can (which costs $2.25) will ride on a rubber cushion (which costs 12 cents) and it'll last longer.

SEALER SEAL

SMEAR GREASE
ON GASKET

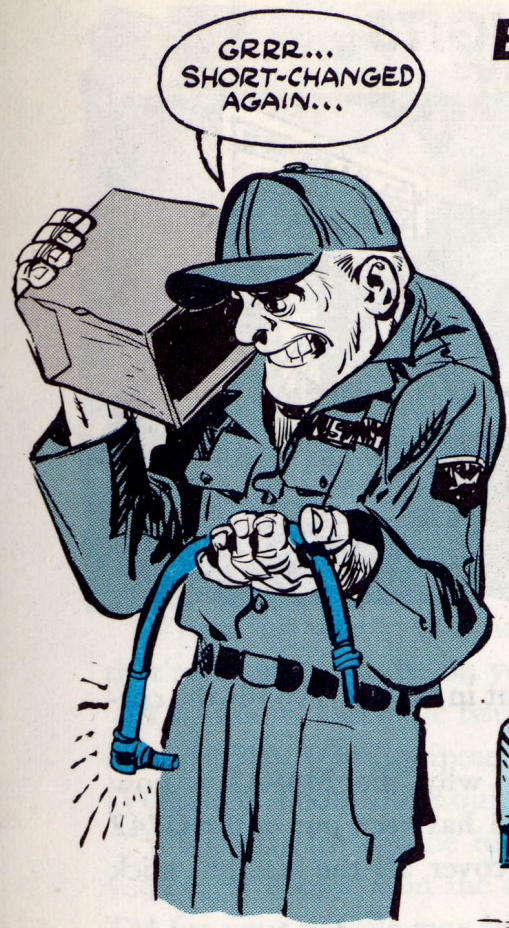


It's general knowledge that the M151 1/4-ton truck's oil filter gets changed every 6000 miles or semi-annually. But it's not generally known that when you're putting on a new filter, the sealing gasket should first be soaked in oil.

Some gaskets may become dry and hard while in storage. A brittle gasket can tear, break or leak.

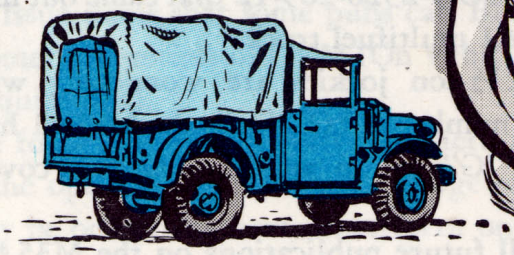
It's also a good practice to put a thin smear of GAA on the filter's sealing surfaces. This'll let the seal slide in place while the filter's screwed down tight.

BY THE EACH



You may get short-changed when you order replacement spark plug cables for your 3/4-ton G741-series trucks if you don't dig your -20P.

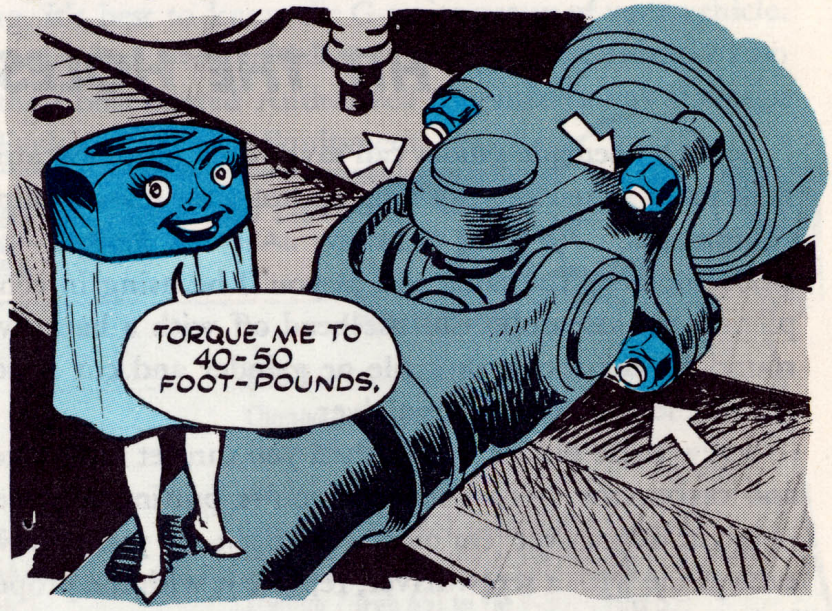
Page 41 in TM 9-2320-212-20P (Feb 60) lists Cable Assembly, Power Electrical, FSN 2920-620-3964, for five spark plugs. This FSN will not automatically bring you five cables.



3/4-TON U-JOINT NUT

Are the prop shafts on your 3/4-ton G741-series trucks doing the twist because the universal joint bolts are working loose?

If so, then you need a new self-locking nut that comes under FSN 5310-057-7080. This'll keep the U-joints tight. These new nuts get torqued to 40-50 foot-pounds.



The nut is not in supply yet for SNL G741 use. Have your support people order them from the US Army Tank-Automotive Center, ATTN: SMOTA-F, Warren, Michigan 48090.

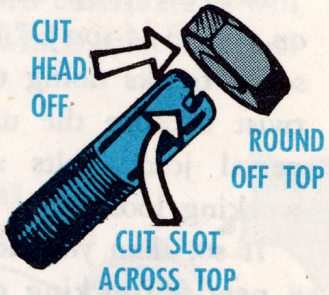
M35A1'S NEW DIGITS

Yep. That's right! LO 9-2320-209-12 that came out in May of 1965 is the correct LO for the M35A1 multifuel truck.

No doubt many 2½-ton jockies are wondering why the M35A1 is now covered by this new numbered LO. Well, the M35A1 has been put in the G742 series group — this "G" group and the LO now cover all the straight stick 2½-ton trucks.

This means that all future publications on the M35A1 will come out under this 9-2320-209- number instead of the old 9-2320-235- number.

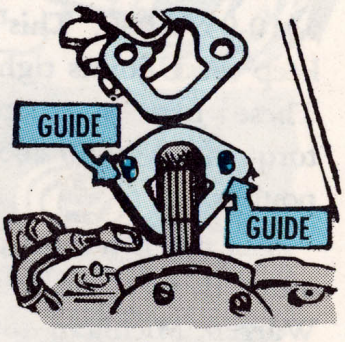
HIT THE HOLES



Some homemade guides can save you a lot of sweatin' and cussin' when you're lining up holes for reassembling equipment.

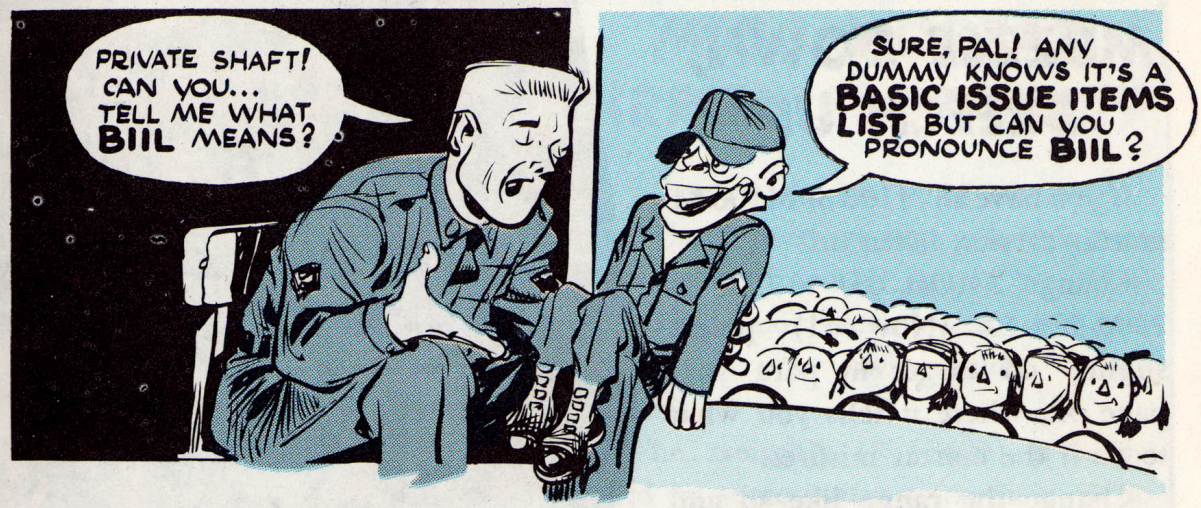
Use bolts of the same size as you'll be using in completing the assembly. Cut the head off with a hacksaw, round off the top with a file or grinder and cut a slot across the top for a screwdriver.

Screw these guides in and then you can set the gasket and carburetor — or whatever you're putting together — right down over 'em nice 'n' straight. As you remove each guide with a screwdriver, replace it with the proper bolt.



You can make different size sets of these guides and keep 'em handy for different jobs.

BIIL-OEM-OVM-VT&E . . . WHERE TO FIND IT

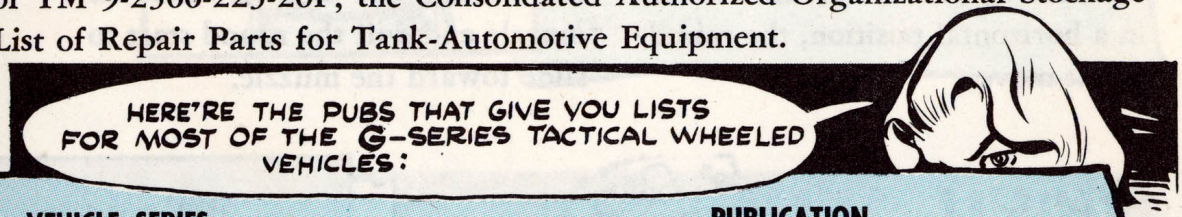


Where, oh where, are the lists that give the rundown on equipment and tools that're supposed to be on your tactical wheeled vehicle?

You know, the basic issue items that some pubs call BIIL (Basic Issue Items List) or OEM (On Equipment Materiel) or OVM (On Vehicle Materiel) or VT&E (Vehicular Tools and Equipment).

Well, that list can be found in several places—where it is depends on the vehicle. It could be in the operator's TM—or a change to the TM. The right TM for your vehicle may be one of the new -10 series or one of the old ones, put out about 10 years ago, that covers both operation and organizational maintenance.

Before you start looking, it's best to know the G-series group of your vehicle. If you don't know it, you can find your vehicle's G group in the front section of TM 9-2300-223-20P, the Consolidated Authorized Organizational Stockage List of Repair Parts for Tank-Automotive Equipment.



VEHICLE SERIES	PUBLICATION
G-740 1/4-ton (M38)	ORD 7 SNL G-740 (Jun 56)
G-758 1/4-ton (M38A1, etc.)	Change 4 (11 Dec 59) to TM 9-8014 (Apr 55)
G-838 1/4-ton (M151)	TM 9-2320-218-10 (Oct 62)
G-823 1/2-ton (M274)	TM 9-2320-213-10 (Jul 63)
G-741 3/4-ton (M37, M37B1, etc.)	Change 8 (May 65) to TM 9-8030 (May 55)
G-742 2 1/2-ton (M34, M35, M35A1, etc.)	TM 9-2320-209-10 (Feb 65) Change 1 (May 65)
G-749 2 1/2-ton (M135, M211, etc.)	Change 7 (Feb 65) to TM 9-8024 (Oct 55)
G-744 5-ton (M41, M51, etc., including the wrecker and trucks with multi-fuel engines)	Change 3 (Jan 65) to TM 9-2320-211-10 (Mar 63)
G-792 10-ton (M123, M125)	Change 3 (Jan 65) to TM 9-2320-206-12 (Feb 60)

FOR MORTAR MISFIRES . . .

MUZZLE DOWN, BREECH UP

If you have an M106 or M106A1 mortar carrier, listen up.

Change 7 (Oct 63) to TM 9-2300-224-10 (Nov 61) points slightly off target in para 161, page 42, where it tells you what to do if the mortar misfires.

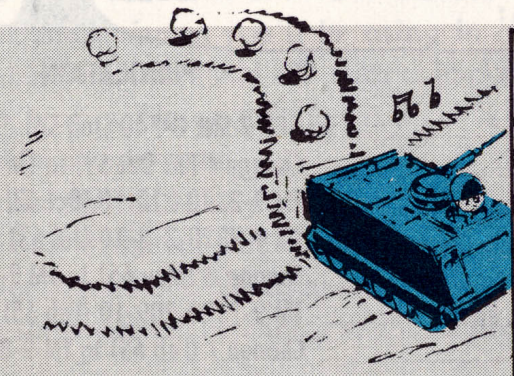
Change the range like so and you'll be target center when you read para 161 for effect. . . .

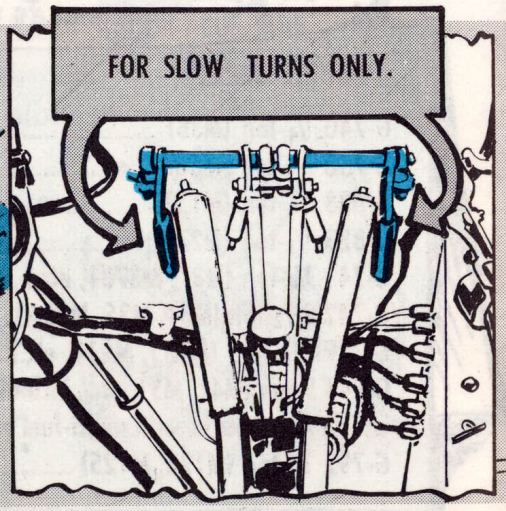
In c(3) on page 42 of the Change 7 it tells you to elevate the mortar as high as you can. What they mean is depress the mortar as low as you can.

In c(5) on page 43 it says the third man raises the breech end of the mortar to a horizontal position so the round will move down the tube toward the muzzle. Actually, with the breech end of the mortar in a horizontal position, the round won't move.

The third man has to raise the tube slowly and steadily to the horizontal and then give it a forward incline. Only when he has the breech end higher than the muzzle end will the round start to slide toward the muzzle.

THIS'LL (PIVOT) STEER YOU RIGHT





The pivot steer on your M106 or M106A1 mortar carrier is the handiest invention since girls . . . but, like girls,

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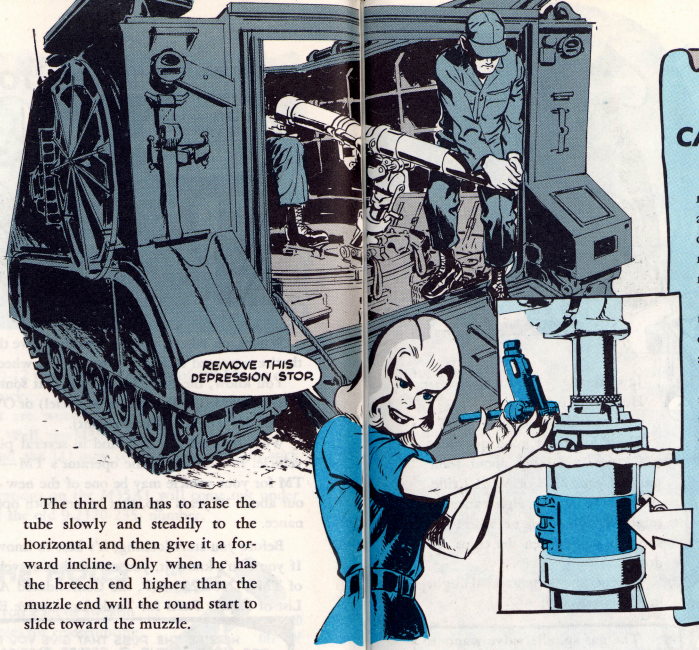

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M106 MORTAR CARRIER STOP STUFF

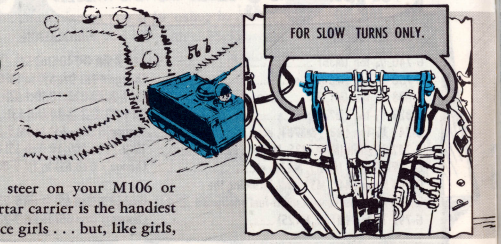
When you had an M84 mortar carrier the depression stop assembly was a real useful article. It kept you from cranking your elevation so low you might hit your own vehicle with a round.

The assembly (8732403) is being used by some outfits with their M106 or M106A1's, where it's not needed at all.

With the M106 series you don't have a problem. Because of the recoil stop and the way the vehicle is made, you can't crank low enough for a round to hit the vehicle. So-o-o-o, you don't need the depression stop assembly. So-o-o-o, turn it in to supply already.

Before you fire, though, make sure the recoil stop clamp is in place and secure like it says on page 37 of Change 7 (Oct 63) to your TM 9-2300-224-10 (Nov 61).

THIS'LL (PIVOT) STEER YOU RIGHT



The pivot steer on your M106 or M106A1 mortar carrier is the handiest invention since girls . . . but, like girls, it can be dangerous if you don't handle it right.

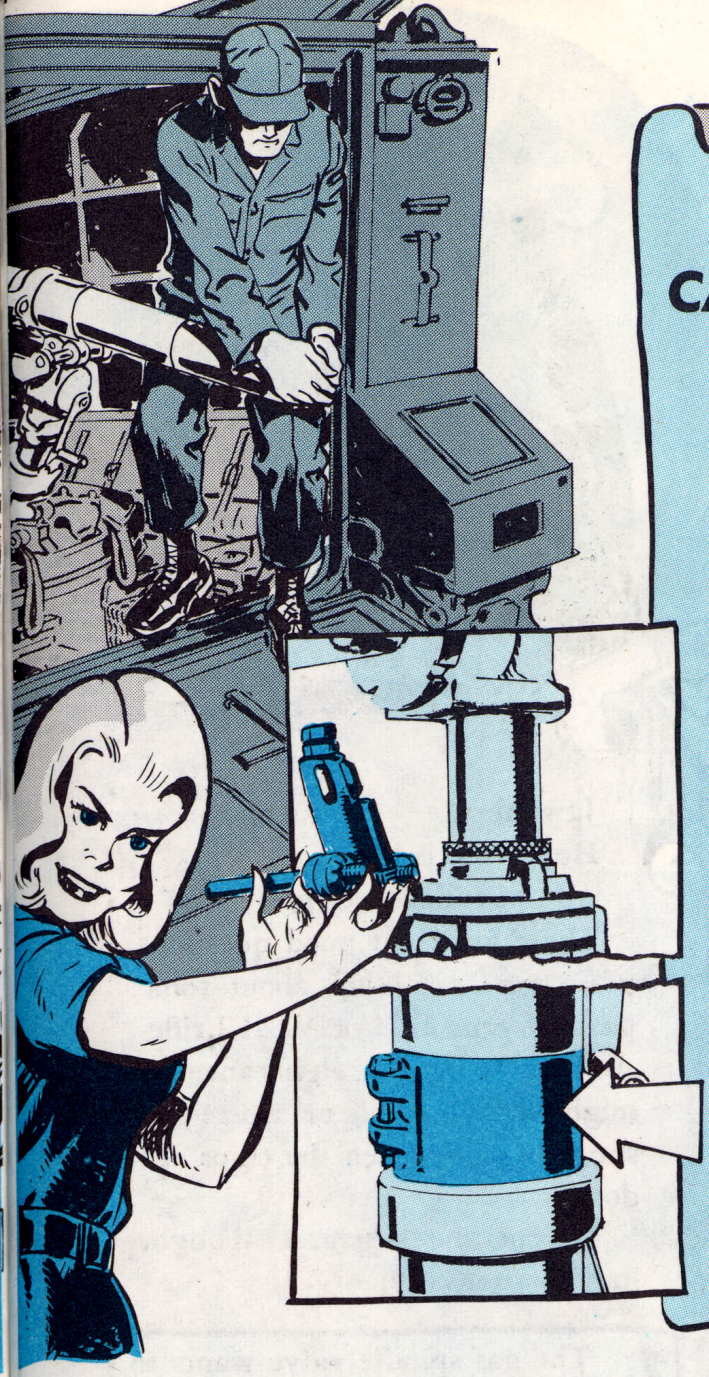
Thing to remember, when you pull back on a pivot steer lever you lock the track on that side. This is OK if you're going slow, like under 10 miles an hour. But if you pull on the pivot steer when you're going fast, you make your vehicle a portable disaster area.

If you're lucky you merely throw a track and break a final drive. More likely you'd also wreck your differential. If you turned over there could also be heavy damage to the human components of the vehicle.

So why make business for the medics and the repairmen?

Pivot steer is for s-l-o-w turns (under 10 MPH). Use your regular steer handles if you're going faster.

With pivot steer you'll get best results with your shift in 1-2 or 3-4 range.



M106 MORTAR CARRIER STOP STUFF

When you had an M84 mortar carrier the depression stop assembly was a real useful article. It kept you from cranking your elevation so low you might hit your own vehicle with a round.

The assembly (8732403) is being used by some outfits with their M106 or M106A1's, where it's not needed at all.

With the M106 series you don't have a problem. Because of the recoil stop and the way the vehicle is made, you can't crank low enough for a round to hit the vehicle. So-o-o-o, you don't need the depression stop assembly. So-o-o-o, turn it in to supply already.

Before you fire, though, make sure the recoil stop clamp is in place and secure like it says on page 37 of Change 7 (Oct 63) to your TM 9-2300-224-10 (Nov 61).

it can be dangerous if you don't handle it right.

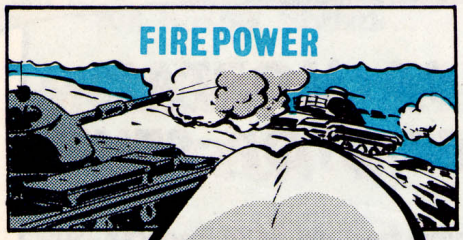
Thing to remember, when you pull back on a pivot steer lever you lock the track on that side. This is OK if you're going slow, like under 10 miles an hour. But if you pull on the pivot steer when you're going fast, you make your vehicle a portable disaster area.

If you're lucky you merely throw a track and break a final drive. More likely you'd also wreck your differential. If you turned over there could also be heavy damage to the human components of the vehicle.

So why make business for the medics and the repairmen?

Pivot steer is for s-l-o-w turns (under 10 MPH). Use your regular steer handles if you're going faster.

With pivot steer you'll get best results with your shift in 1-2 or 3-4 range.



Uh?

Jawohl.

How loose is loose?

And how tight's tight?

Those are right good questions when you're talking about some parts of your M14 or M14E2 rifle. And knowing the right answers might save you a gig or, worse yet, she won't fire when the chips are down.

To cut the suspense, though, here're your cues:

1 The gas spindle valve wants to be loose as a goose.

2 The gas cylinder plug ought to be no more than snug-tight.

3 The gas cylinder lock's got to be just right — neither loose nor tight.

And the operating rod guide? Well, looseness is no problem as long as the operating rod works OK.

Vas ist Loose?

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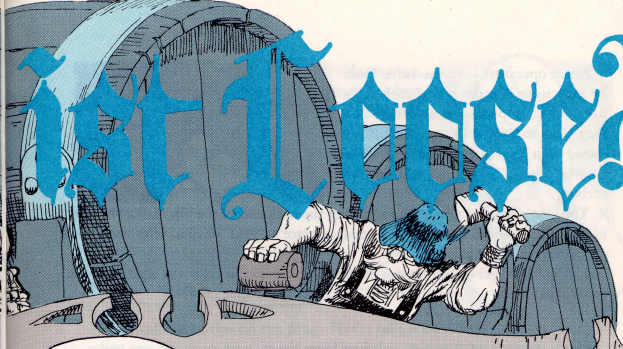

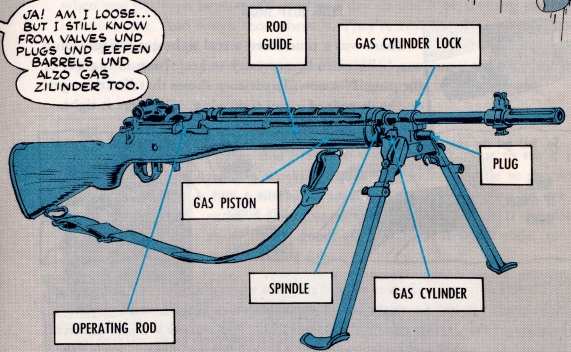

SPINDLE VALVE

Loose as a goose on the gas spindle valve means you can turn it with your thumb to vertical for normal firing and to horizontal for grenade firing.

If you have to use a block of wood to get the valve to go in and pop out, or if you need a coin, cartridge or your combo tool's blade to turn it, brother, you know right off the carbon's building up between the spindle valve and the gas cylinder. Short recoil's just around the corner.

MORE

Is It Loose?

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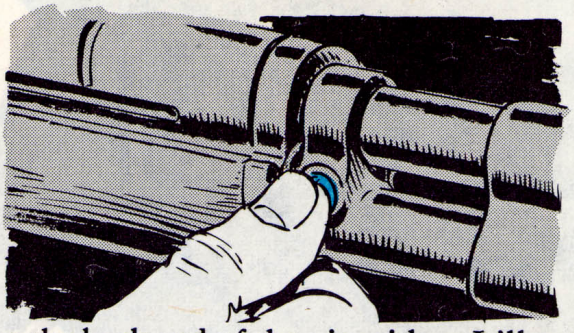
PS MORE

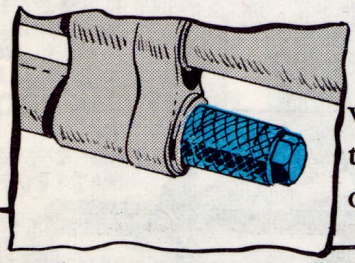
Smart operators keep the valve loose by exercising it at the end of each day's firing or at inspection time. Right . . . they push the valve in and out till it's loose, then they turn it on and off a couple times. This'll get rid of the carbon.



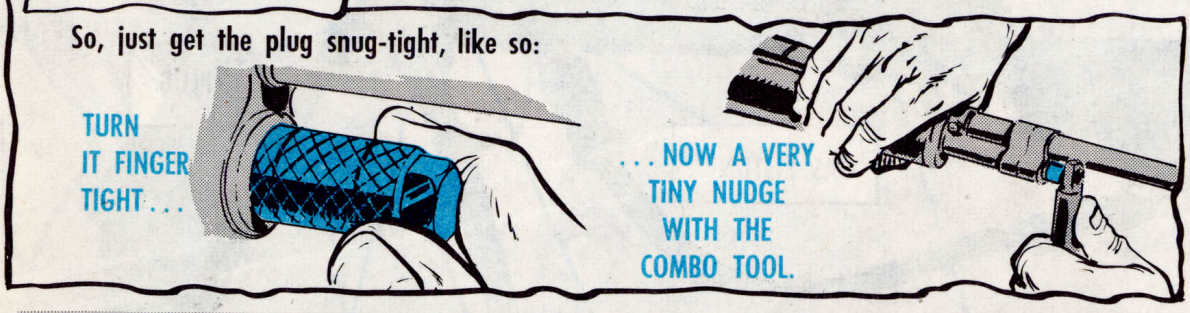
You don't have to worry about lubing the back end of the pin, either. It'll get plenty while you're coating the outside surface of your weapon with the lubricant prescribed in your TM.

Just don't forget to end up this exercising bit with the valve slot up-and-down for normal firing . . . or your rifle'll end up as a one-shot Lucy.

PLUG JUST SNUG



There was a time when a real tight gas cylinder plug was believed to be necessary to keep from losing gas or the plug. Not now. Experience shows that if carbon gets on the threads of a real tight plug, it'll freeze it tight.

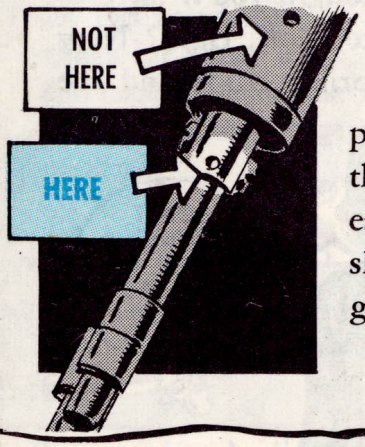


There's only one right way to hold the M14 when plugging or unplugging it. Put your left hand over the barrel and cylinder, or if the bipod's attached, hold on to that. Of course, if the barrel's hot, you can stick a screwdriver between the barrel and the cylinder for a little leverage when removing the plug. But, don't ever tighten the plug when the barrel's hot. You might never get the darned thing off.

And, for Pete's sake, to remove a stubborn plug, never grab hold of the handguard or you might bust it. Also, never brace the butt between your feet to get more heft on the plug or you'll bust the stock. It's OK to plant the rifle between your size 12's like it shows in the old TM, but don't use your feet like a vise. If the plug's frozen that tight, let your armorer go to work on it.

A couple more tips on the plug: Never take it off till you have to . . . and when you put it on be sure it's good and dry or you'll be inviting the big carbon freeze. And watch those threads. They're real fine. You could cross 'em up if you're not extra careful.

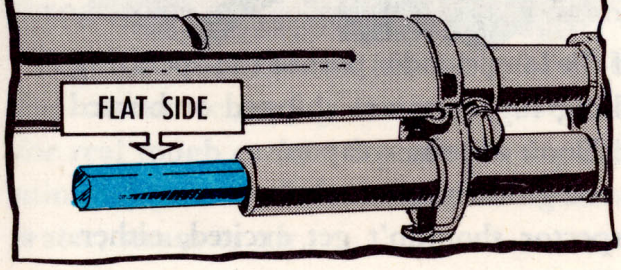
As a general rule, you'd only remove the M14's gas plug if the gas piston's on the bum . . . meaning so dirty it won't slide, or it's installed wrong.



CHECK THAT PISTON

You don't have to take anything apart to see if the piston's working right. Just lock the slide to the rear, then turn the weapon end for end, keeping an eye or ear at the exhaust port (not the drain hole). If the piston slides freely, good; all is well. If it won't slide, you've got a cleaning job.

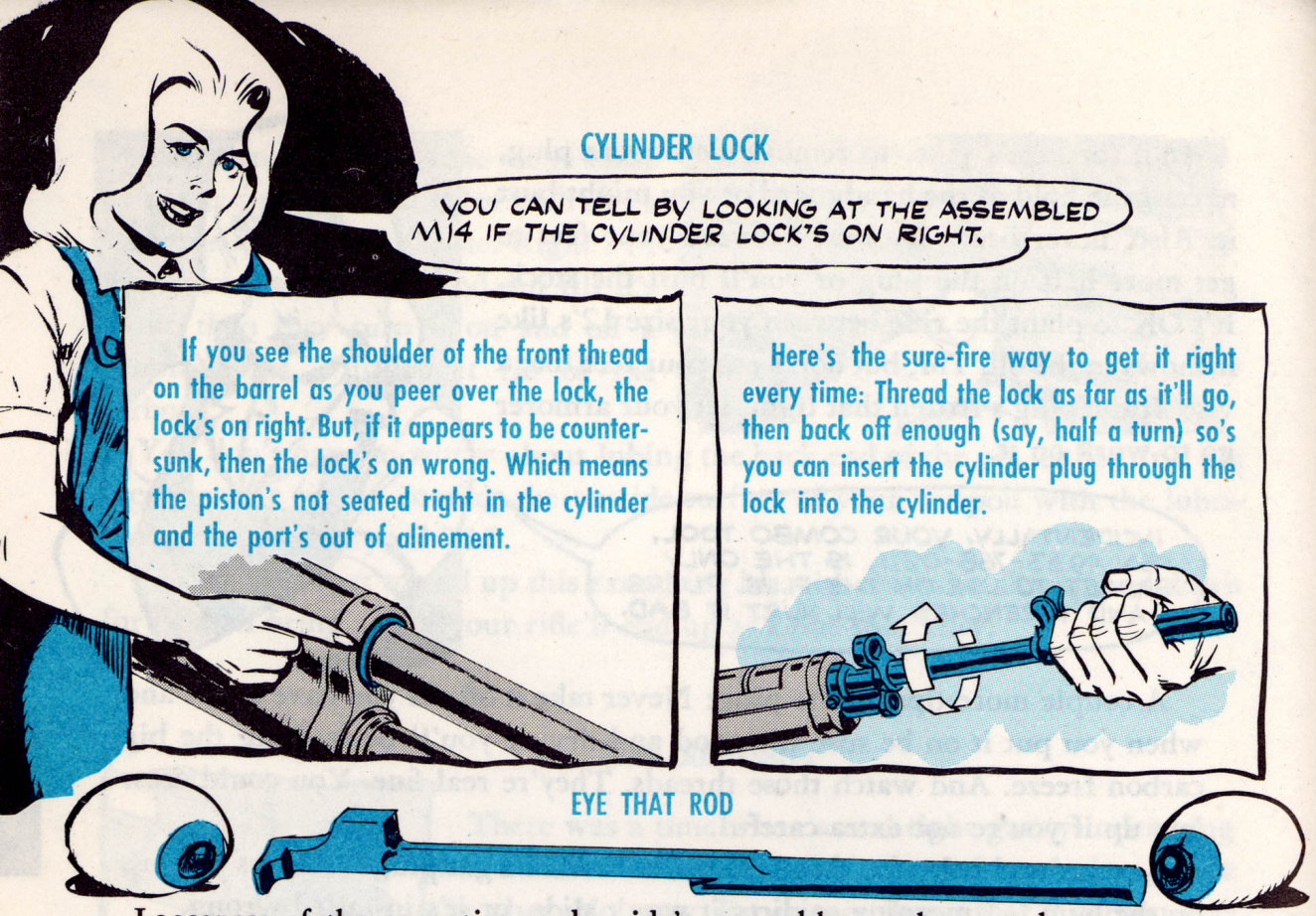
To check for correct installation of the piston, take off the stock. The flat side of the piston must be facing upwards toward the barrel. If the round side's up, the piston can't work, 'cause the gas port'd be blocked.



Sound's kind of nutty, but it could happen that the piston'd be in there wrong — and you wouldn't be able to tell the difference by looking at the assembled weapon. Of course, this'd mean that the plug threads would have to be crossed and the plug overtightened. Very bad. This'd lead to a burring inside the cylinder. Very, very bad.

So, get that flat side up every time when installing it, huh?

PS MORE



Looseness of the operating rod guide's no problem as long as the operating rod'll slide without binding. To check this out, though, you'll have to strip your rifle a bit further. You already have the stock off, right? Now remove the connector assembly, the operating rod spring guide and the operating rod spring.

OK. With the rod in place, attached to the bolt, tilt your weapon end-for-end. The bolt should move freely under its own weight. If it does this, everything's under control.

But, if you run into any binding whatever, you'd better make a thorough check. The trouble could be minor — like dirt or twigs or burrs or stuff in the camming recesses or on the operating rod. You or your armorer can take care of these.

But, if it's worse than that — like if the long slender part of the operating rod's cracked or bent, or the rear locking lug areas are chipped or burred bad — let your armorer carry the ball. Don't use the weapon.

Now, during this test the operating rod guide might look loose. But don't let this shake you up — and your inspector shouldn't get excited, either.

A guide that's real loose in the disassembled stage like this could be plenty tight enough when the weapon's assembled since the inside contour of the stock would hold it in check.

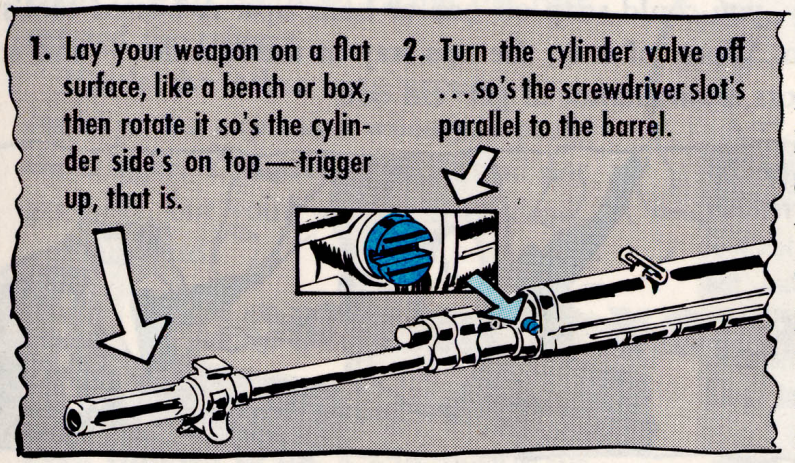
So, don't let anybody tell you you ought to tighten that guide by peening its spring pin. Just 'cause somebody can see daylight through the pin doesn't mean it's loose or damaged. The new split-type pins all look that way. The old pins, of course, were solid. As long as the pin's in place, leave it alone . . . it'll do a better job if you don't irritate it.

In other words, you keep loose, ja?

NO LUBE

Of course, you know you don't ever put any lube at all in the M14's gas system parts. You assemble 'em absolutely dry — and clean. These parts are made of corrosion-resisting steel that don't need lubing. Matter of fact, oil'll only invite trouble — dirt, corrosion, sluggishness, no-go!

But sometimes it's pretty hard to keep oil out of there when you're cleaning and lubing the rest of the weapon. So, here's a little trick to protect the cylinder, piston and plug before you start cleaning and coating the inside of the bore with prescribed lubricant:



This way, if any oil from the patch should happen to sneak into the opening in the cylinder valve, Gravity Gerty'll draw it back down so's the patch can wipe it off next time through. No oil will reach the cylinder plug this way, that's for sure.

But, again, don't forget to turn the cylinder valve upright when you're through.

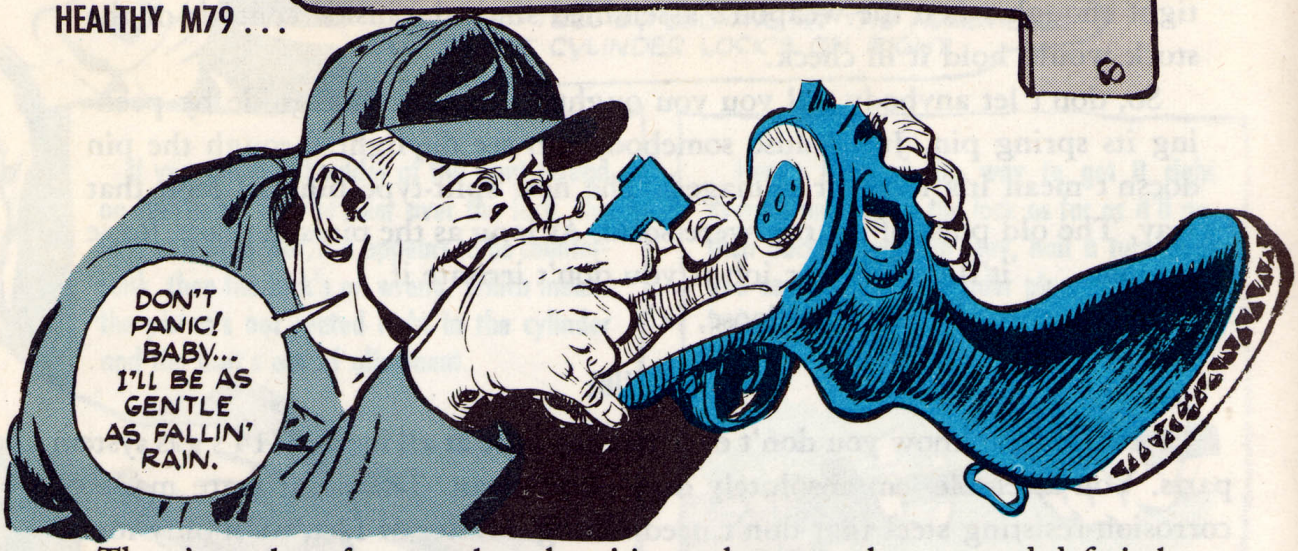
Your TM 9-1005-223-12 (Feb 65) is chockful of dope on correct methods for cleaning the M14's gas system parts — pay hard attention to it. Especially, don't use steel wool, a wire brush or scrapers of any kind on these parts. You might change some of the critical dimensions and ruin your fire.

Use CR bore cleaner (FSN 6850-682-6835 — 2-oz can) for normal cleaning and carbon removing compound P-C-111a (FSN 6850-620-0610 — 5-gal can) for real tough carbon deposits. In a pinch, you can try dry-cleaning solvent or mineral spirits paint cleaner, but never use gasoline, benzene or high-pressure water, steam or air.

END

FOR A HEALTHY M79 . . .

USE A GENTLE WRENCH

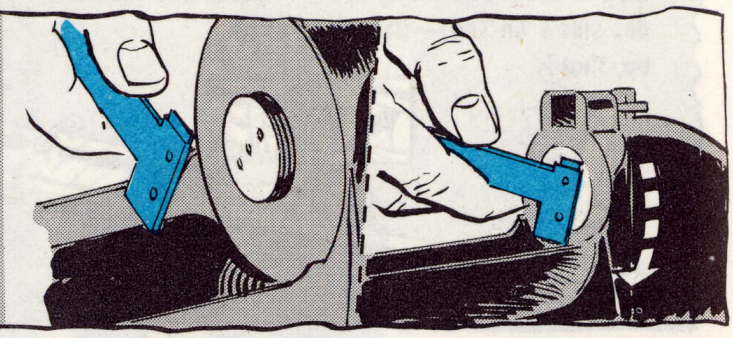


There's a place for muscle—but it's not between the ears and definitely not on the wrench that comes with your M79 grenade launcher.

Too much heft when you're installing the firing pin retainer or when attaching the receiver group to the stock could put your weapon on sick call.

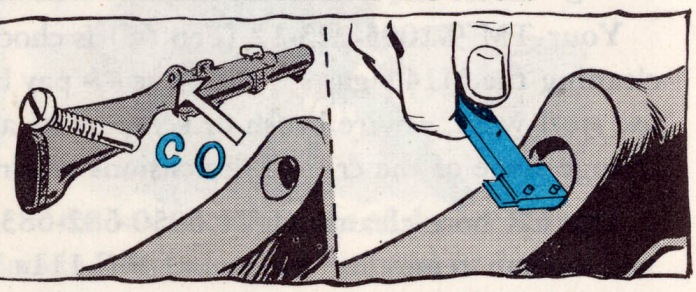
Like, f'rinstance, unless you seat your wrench just right in the retainer's holes and do the twist real easy, you could snap off one or both tips. A busted tool's only part of the woe, too. Worst of it is, the tips stay in the retainer—and it takes a long trip to support maintenance to get 'em out.

So, next time, try it this way: Put both tips all the way in the retainer holes by flattening the face of the tool against the retainer. Then turn the wrench real slow till you meet resistance. Then seat it firmly. Remember, any extra pressure at this point could bust a tip or two.



To save your M79 some major surgery for a split stock, stow the heavy hand when you're tightening the pan-headed machine screw into the stock.

First make sure you get those two washers on the screw in the right order like in Fig 22 of TM 9-1010-205-12 (Feb 61). Next, run the screw up till it's snug . . . then add about a 1/8 turn with the wrench. Enough, already!



And here's a special tip to guys who've been using a screwdriver instead of their wrench on this job. It's OK to use a screwdriver if you're having wrench trouble, but be sure the blade's wide enough—and, easy on that muscle!

SHAKE THE FLAKE

Dear Editor,

Maybe you'd like to pass along this tip to outfits with M60 machine guns. Before you hit the field, put your asbestos mitten in a plastic bag before stowing it in the carrying case with the spare barrel. This'll keep the pesky white asbestos flakes from getting into the nice oiled bore. Also, it'll make the glove last longer.

SP 4 Ray Forman
APO New York 09029

(Ed Note—Crackerjack idea.)

HEAD TO THE REAR... ALWAYS!

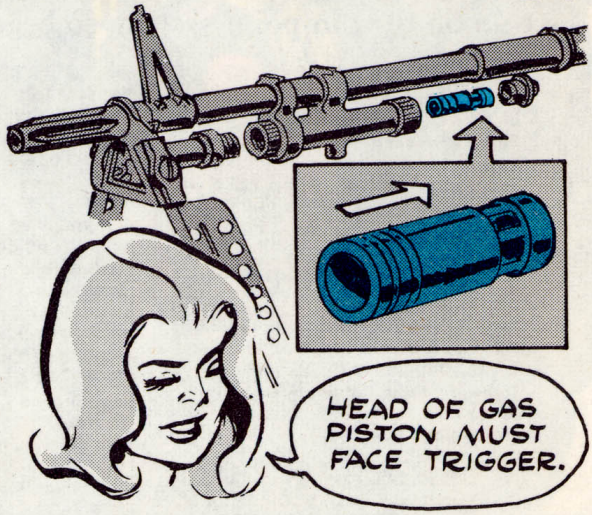
Want to save yourself some face?

Then put this first and last on the pre-firing checklist for your M60 machine gun:

Make darned sure the gas piston's in right—with the head facing the rear toward the trigger.

If it's the other way around, you could get an explosion when you press the trigger. You may be lucky and not get hurt, but your weapon'll be dead.

'Nuff said?



DON'T BUG YOUR RIFLE

Oops, hold everything! If you've been tempted to use a 2-oz plastic insect repellent (bug juice) bottle to hold your rifle oil on maneuvers or otherwise—hold one! It's hard to get those li'l bottles absolutely clean and dry inside, and if you don't, the water and acid from the bug juice can contaminate the oil and foul up your weapon's innards! So, better stick to the 4-oz metal oil can that's issued to you unless you're absolutely sure your plastic container is clean and dry.

Vehicle Pubs Go Pin-Point

Vehicle publications dated after 1 Nov 65 will be distributed by pin-point.

Get your unit's requirements in (thru channels) before 10 Oct 65 to the St. Louis Publications Center on —

DA Form 12-37 — for Tracked Vehicle Publications.
DA Form 12-38 — for Wheeled Vehicle Publications.
DA Form 12-39 — for Trailers and Dollies Publications.

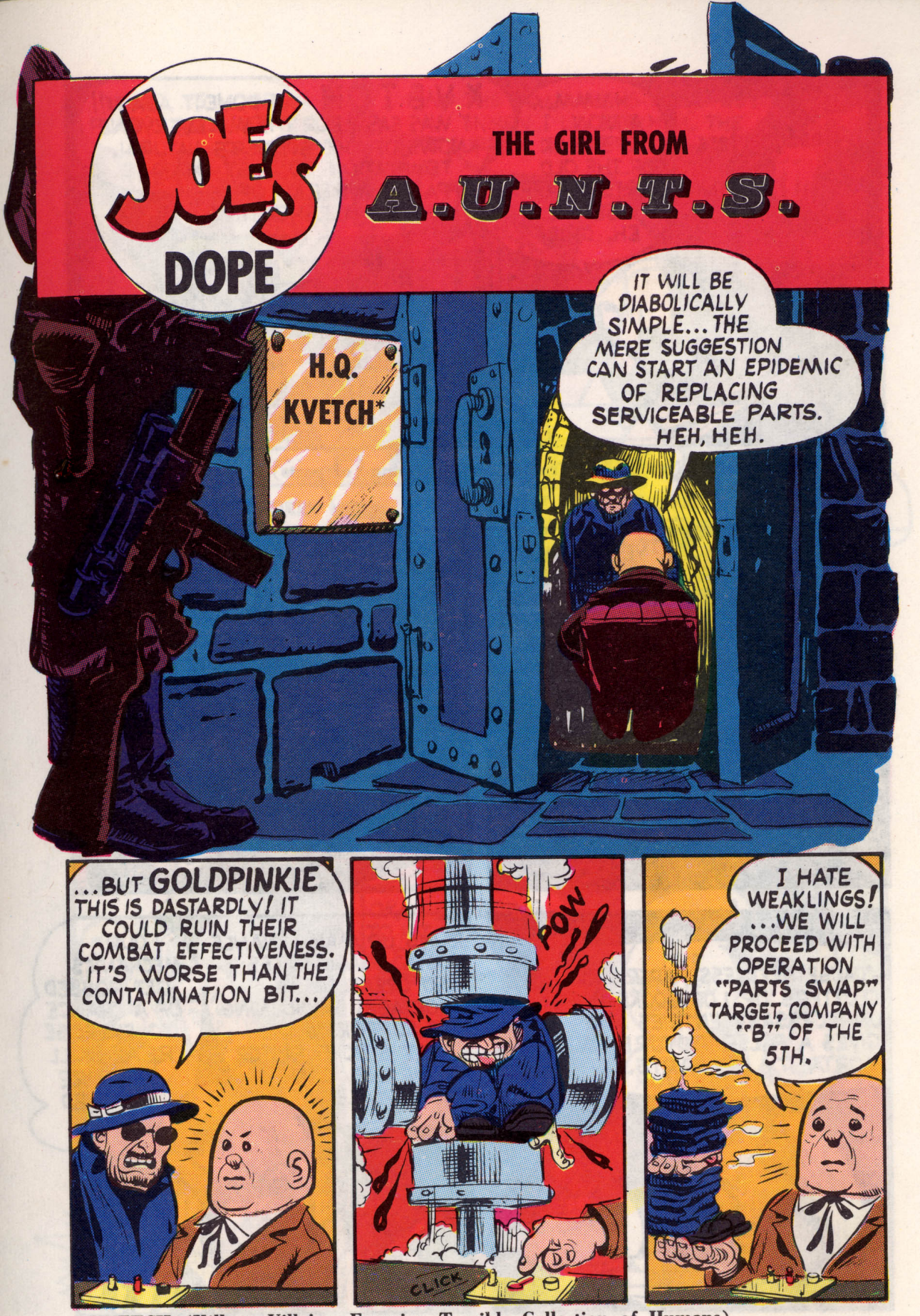
See DA Circular 310-38 (30 Jun 65) for the word on this new pin-point distribution.

Any forms the Center receives after 10 October will get delayed in getting set up on the pin-point system, so beat that deadline.

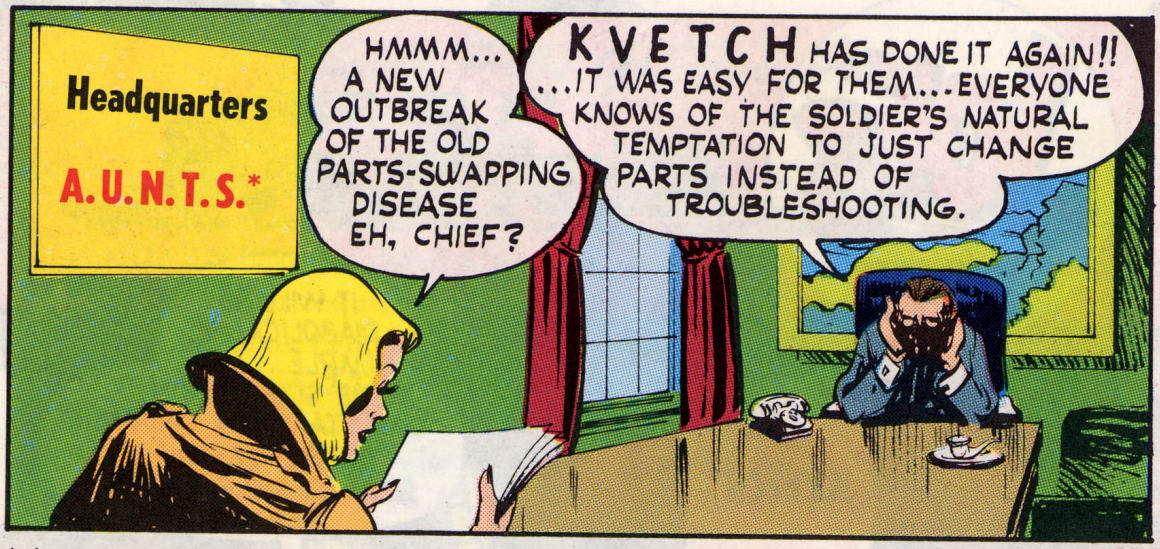
A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

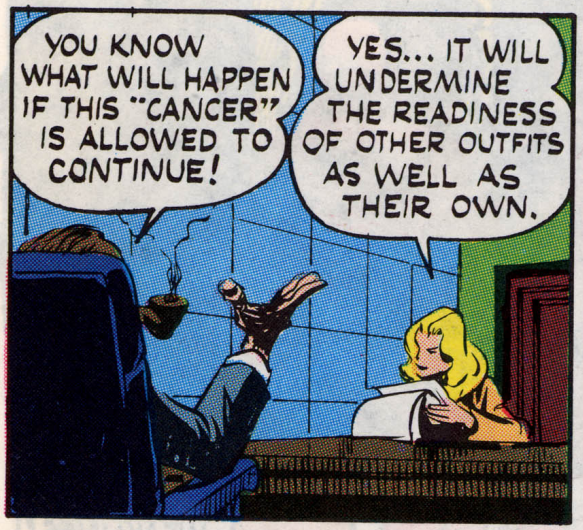
TM 1-U8-S, Mar, U-8.
TM 1-1OH-23C-4-20P, Apr, OH-23.
TM 1-225, Apr, Fixed & Rotor Wing.
TM 3-1040-206-20P, May, Flame Thrower, Mech, Main Armament, Turret Mtd.
TM 3-4240-224-20P, Apr, Breathing Apparatus, Comp Air, ABC-M15A1.
TM 3-4240-241-12, May, Filter Unit, Gas-Particulate, GED, 300 CFM, ABC-M6A1 and EMD, 300 CFM, ABC-M6A1.
TM 3-4240-241-20P, May, Filter Unit, Gas-Particulate, GED, 300 CFM, ABC-M6A1 (4240-889-2316) and EMD, 300 CFM, ABC-M6A1.
TM 5-1450-202-20P, Apr, Pershing, Power Gen Equip.
TM 5-1450-203-20P, Apr, Pershing, Power Gen Equip.
TM 5-2805-203-14, Apr, Eng, Gas, 6 HP; Mil Std 4A032-1.
TM 5-3431-217-15, Apr, Welding Mach, Arc: 300-Amp DC, Harnischfeger W300 MG.
TM 5-3805-206-20P, Mar, Intrenching Mach, Barber-Greene 750.
TM 5-4120-235-15, May, Nike-Herc (Imp) Air Cond, Heaters, Fans and Blowers.
TM 5-4310-229-20P, May, Comp, Rotary, Air: GED, 210 CFM, 100 PSI Davey M-210-RP.
TM 5-4310-242-25P, May, Comp, Air, Recip, Champion Pneumatic LP-832-ENG.
TM 5-4320-213-20P, Apr, Comp, Recip, Air, 25 CFM, Champion Pneumatic OE-36-10-ENG.
TM 5-6115-312-15, May, Gen Set, GED 5 KW, Hol-Gar Mdl CE-56-AC.
TM 5-6115-312-25P, Apr, Gen Set, 5-KW, AC, Skd Mtd Hol-Gar Mdl CE-56-AC.
TM 5-6115-321-20P, May, Gen Set, DED, 30 KW, Winterized; Port; Skid Mtd, Mil Std SF30MD.
TM 9-1025-200-12, Mar, Howitzer, Med, Towed: 155-MM, M114, M114A1; Howitzer, Med, Towed; Aux Propelled, 155-MM, M123A1.
TM 9-1400-500-12/4, May, Hawk, Sys Description.
TM 9-1410-375-12P/1, Apr, Pershing, Ammo, Msl Oper & Maint.
TM 9-1410-375-12P/2, May, Pershing, Ammo, Msl Oper & Maint.
TM 9-1430-250-12P/4/1, May, Nike-Herc, Ground Con Equip.
TM 9-1430-250-12P/9/1, Apr, Nike-Herc (Imp) Ground Con Equip.
TM 9-1430-250-12P/12, Apr, Nike-Herc (Imp) Ground Con Equip.
TM 9-1430-250-12P/13/1, Apr, Nike-Herc (Imp) Ground Con Equip.
TM 9-1430-250-12P/21/1, Apr, Nike-Ajax, Nike-Herc, Nike-Herc (Imp) Ground Con Equip.
TM 9-1430-250-15P/5/1, May, Nike-Herc, Ground Con Equip.
TM 9-1430-250-15P/8/1, Apr, Nike-Herc (Imp), Ground Con Equip.
TM 9-1430-250-15P/11/1, Apr, Nike-Herc (Imp), Ground Con Equip.
TM 9-1430-250-15P/20/1, Apr, Nike-Ajax, Nike-Herc, Ground Con Equip.
TM 9-1430-253-12P/2/1, Apr, Nike-Herc (Imp), Ground Con Equip.
TM 9-1430-268-15P/1, Apr, Nike-Herc, Nike-Herc (Imp) Ground Con Equip.
TM 9-1430-375-12P/1, Apr, Pershing Msl Oper & Maint.
TM 9-1430-376-12P/2, May, Pershing, Ground Hndlg, Spt & Svc Equip.
TM 9-1430-376-14, May, Pershing, Ground Hndlg, Spt & Svc Equip.
TM 9-1430-511-15P/1, Apr, Hawk, Ground Con Equip.
TM 9-1440-250-12P/6/2, May, Nike-Herc, Nike-Herc (Imp), Ground Hndlg, Spt & Svc Equip.
TM 9-1440-250-15P/1/1, Apr, Nike-Herc, Nike-Herc (Imp), Ground Hndlg, Spt & Svc Equip.
TM 9-1440-250-15P/2/1, May, Nike-Herc, Nike-Herc (Imp), Ground Hndlg, Spt & Svc Equip.
TM 9-1440-250-20/2, Apr, Nike-Herc, Nike-Herc (Imp), Ground Hndlg, Spt & Svc Equip.
TM 9-1440-375-12P/1, May, Pershing, Ground Hndlg, Spt & Svc Equip.
TM 9-1440-500-12/3, May, Hawk, Ground Hndlg, Spt & Svc Equip.
TM 9-1450-375-12P/1, Apr, Pershing, Ground Hndlg, Spt & Svc Equip.
TM 9-1450-376-12P/2, May, Pershing, Ground Hndlg, Spt & Svc Equip.
TM 9-1450-377-12P/2, May, Pershing, Ground Hndlg, Spt & Svc Equip.
TM 9-1550-200-20P/2, Apr, Target Msl, Ground Hndlg, Spt & Svc Equip.
TM 9-2300-224-10/3/2, Apr, Part Two, Carrier, Cmd Post, Lt, Armrd, M577, M577A1.
TM 9-2300-224-10/3/3, Apr, Part Three, Mortar, SP: 107-MM, M106, M106A1.
TM 9-2300-224-10/3/4, Apr, Part Four, Flame Thrower, SP: M132, M132A1.
TM 9-2300-224-20/3/4, Apr, Part Four, Flame Thrower, SP: M132, M132A1.
TM 9-2320-209-20, Apr, Chassis, Trk: M44, M44A1, M45, M45A1, M45C, M46, M46A1, M46C, M57, M58, M58A1; Shop, Trk, M185, M185A1, M185A2; Cargo: M34, M35, M35A1, M36, M36C; Trk, Dump: M47, M59, M342; Trk, Maint: Earth Bor Setter, V17A/MTQ; Trk, Tank: Fuel Ser 1,200-V18A/MTQ; Trk, Maint: Telep Constn, Gal, M49, M49C, M49CA1; Trk, Tank: Wtr 1,000 Gal, M50, M50A1; Trk, Trac: M48, M275, M275A1; Trk, Van: Exp, M292, M292A1; Trk, Van: Msl Firg Data, XM472; Trk, Van: Shop, M109, M109A1, M109A2, M109C, M109D, XM567; Trk, Wrecker: Cr, M108; Trk, Wrecker: Lt, M60.
TM 9-2320-223-10, Mar, Cargo Carrier, M116 Amphibious.
TM 9-2320-223-20, Apr, Cargo Carrier M116, Amphibious.
TM 9-4935-303-12P/1, Apr, Sergeant, Test Equip.

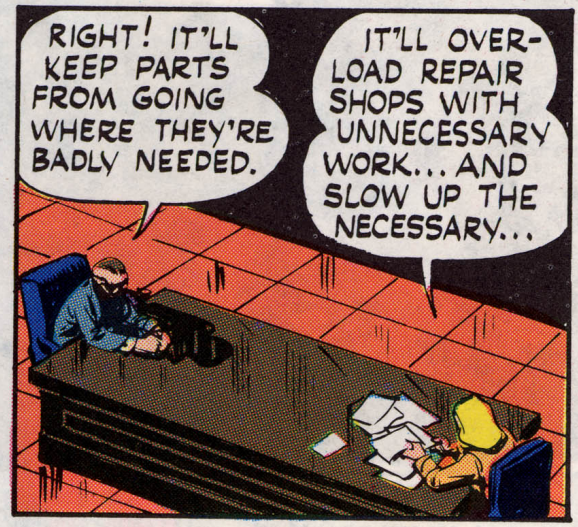


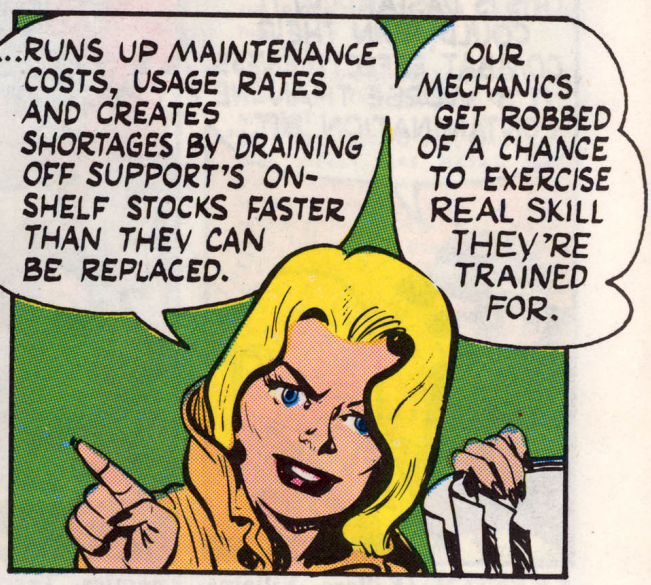
* KVETCH (Killers, Villains, Enemies, Terrible Collection of Humans)

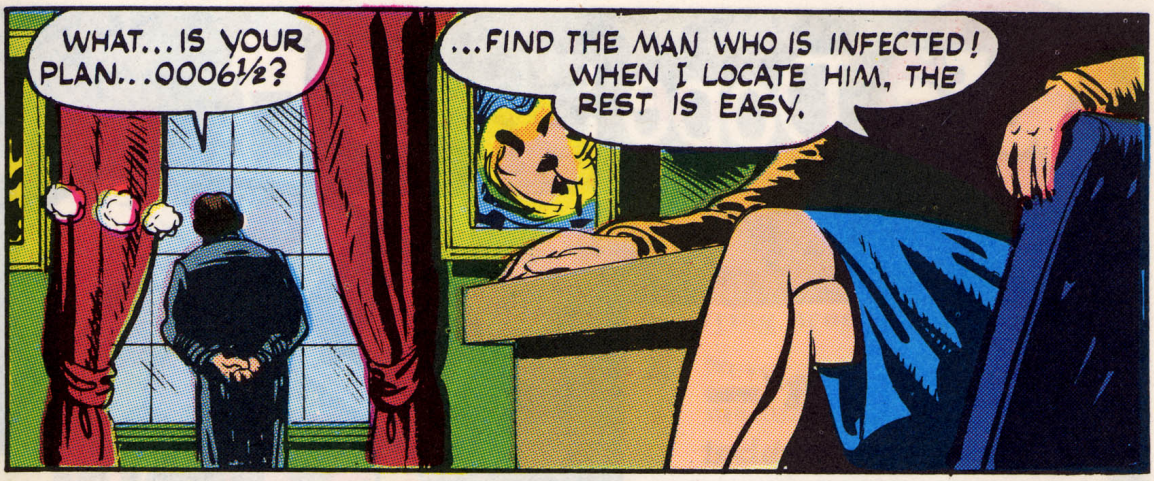


* Against Unnecessary Nonsensical Trading and Swapping (of parts)

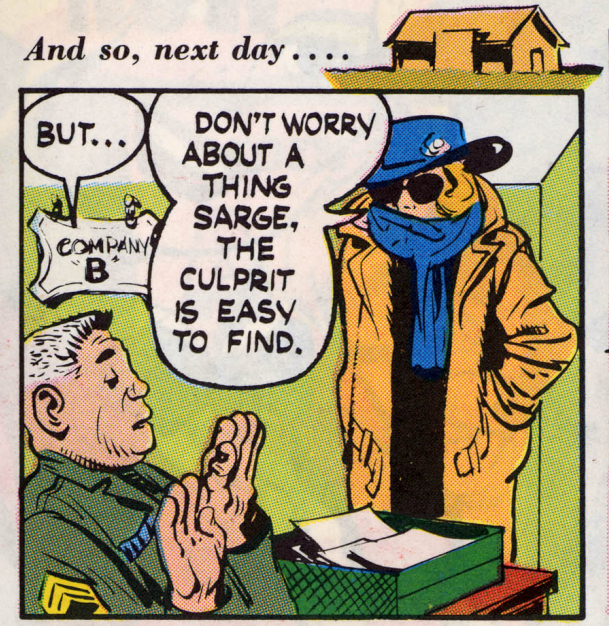


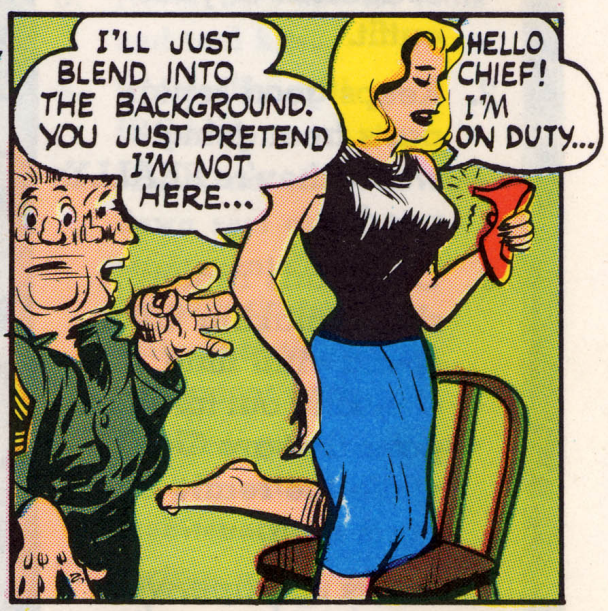


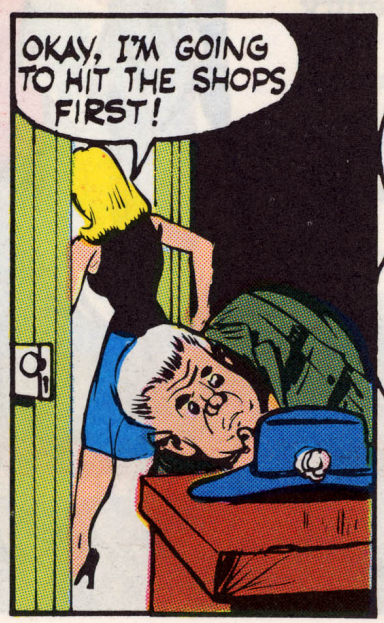


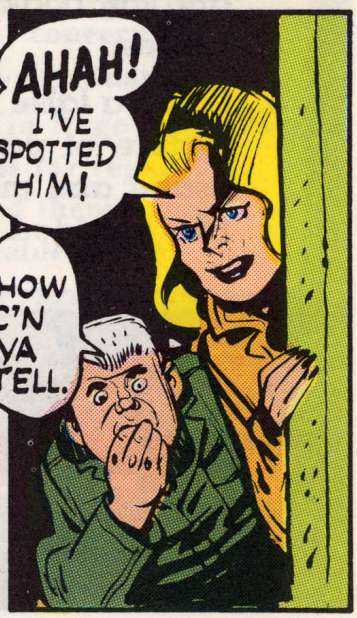


And so, next day....









JOE'S Dope Sheet

THE "SWAPPER"

1. Endangers combat readiness of your outfit.
2. Keeps good repair parts from going where they're REALLY needed.
3. Overloads repair shops, making them spend vital time checking out turned-in parts that are O K... while the really bum parts wait.
4. Builds up paperwork and log book entry chores.
5. Gives a false picture of parts usage and makes PLL lopsided.

WE HAVE THE WORLD'S BEST EQ

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BUL

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I NEED YOU... NOW-

JOIN UP

AGAINST
UNNECESSARY
NONSENSICAL
TRADING and
SWAPPING
(Of Parts)

How To Spot A Wanton Parts Swapper

1. Leaves test equipment lying around unused.
2. Never uses maintenance manuals . . . keeps 'em on shelf.
3. Never uses special tools and tool kits.
4. Unfamiliar with IROAN*.
5. Makes no effort to run down real cause of equipment failure—but substitutes parts without testing until equipment works.
6. Replaces parts but does no preventive maintenance.
7. Swipes part from other good equipment without concern for the supply situation.
8. Turns in large amounts of parts for repair . . . many of them in good serviceable shape.

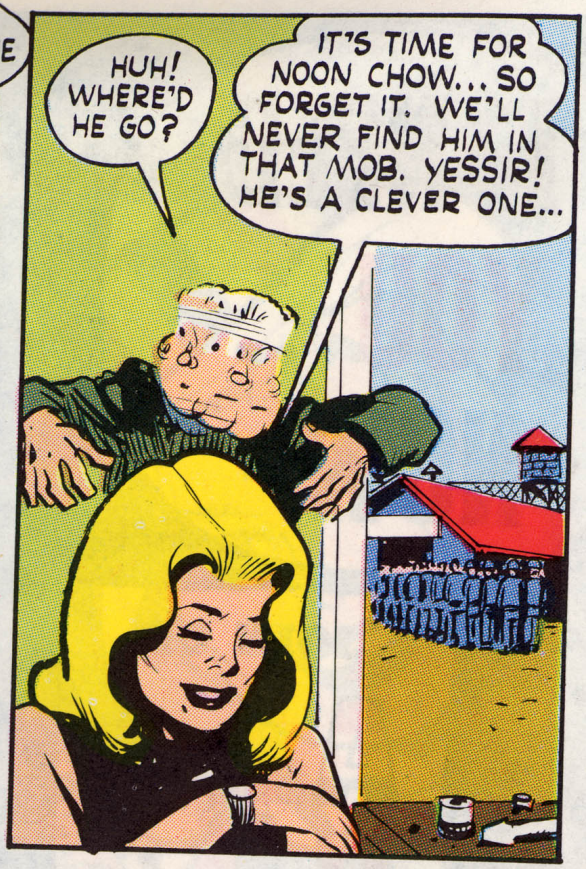
* Inspect, Repair Only As Necessary.

WE HAVE THE WORLD'S BEST EQUIPMENT ... *Take care of it*

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

LLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

SIMPLE... HE'S TUNING AN ENGINE WITH NOT ONE PIECE OF TEST GEAR IN SIGHT.
LET'S GRAB 'IM!


HUH! WHERE'D HE GO?
IT'S TIME FOR NOON CHOW... SO FORGET IT. WE'LL NEVER FIND HIM IN THAT MOB. YESSIR! HE'S A CLEVER ONE...

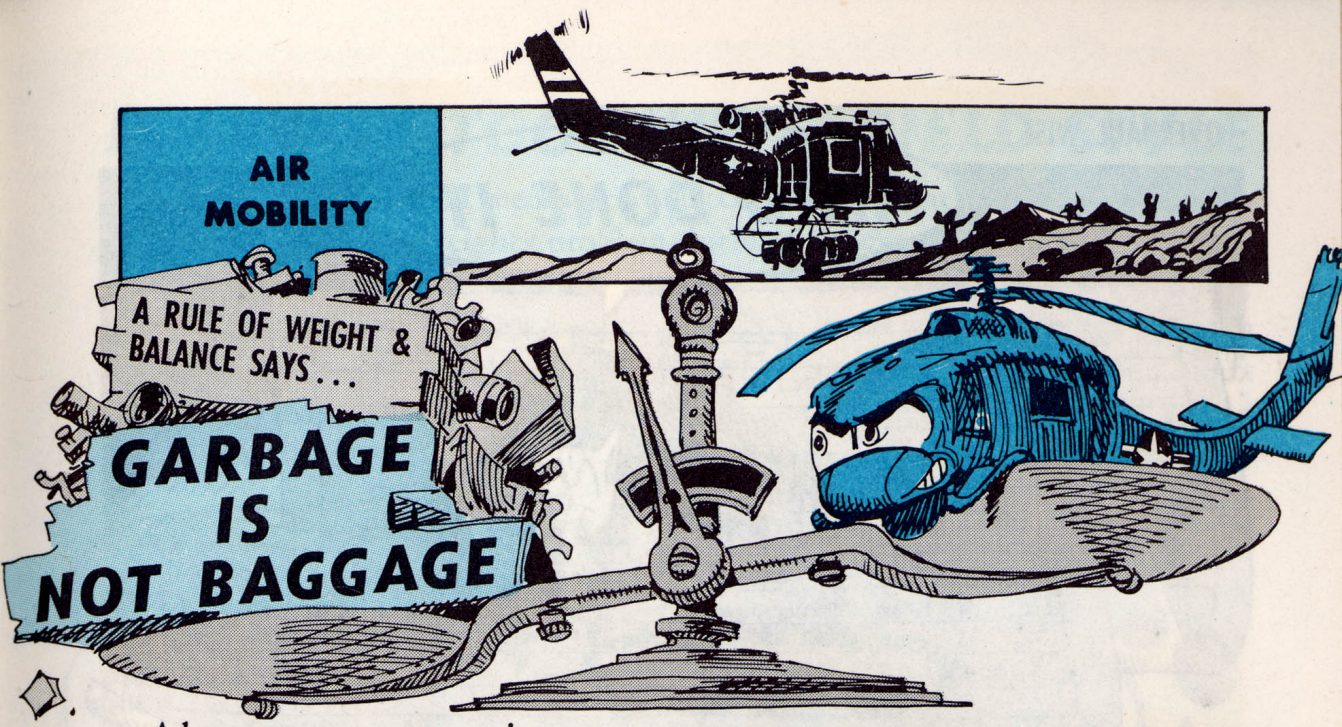
After Chow...

HE'S STILL NOT BACK, SOB WE LOST HIM!
NOT QUITE! NOTICE THIS UNUSED TM. FOR A MAINTENANCE SHOP, THAT'S KIND OF UNUSUAL!
HE'S AROUND, DON'T WORRY.

SEE! HE TOSSED THESE PARTS INTO THE "FOR REPAIR" BOX. UNWRAPPED AND UNPROTECTED!
WHAT A FIEND!
FOR REPAIR

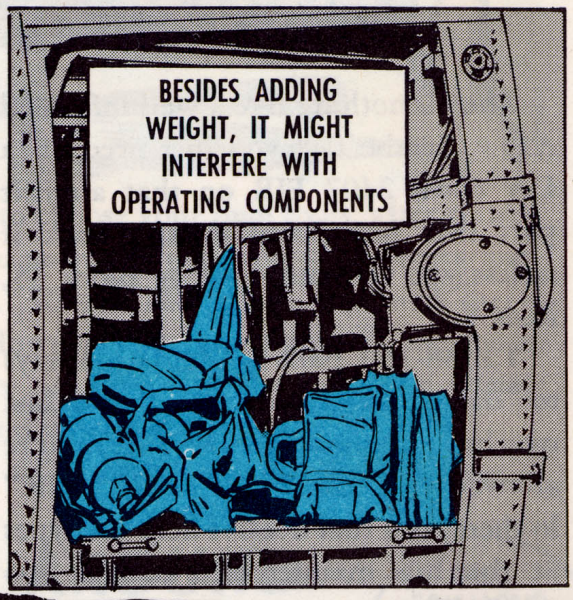
HEY! THERE HE IS... LET'S NAIL 'IM!
HOLD IT... SEE THESE SPARK PLUGS? HE JUST PULLED THEM BY THE NUMBERS! NEVER EVEN TESTED THEM... WE'LL CUT HIM OFF AT THE SUPPLY ROOM.
SUPPLY
GOTCHA! YOU SAB-BUT-TOOR!
TALK, TALK! WHO PUT YOU UP TO THIS? WE'LL FIND OUT ANY WAY... SO MAKE IT EASY ON Y'RSELF.
LET ME TRY....
I CAN'T THINK. MY MIND IS BLANK.
YOU WERE EASY TO SPOT... ALL THE TRAITS OF A PARTS-SWAPPER! EVEN A RECORD OF TURNING IN LARGE QUANTITIES OF PARTS FOR REPLACEMENT. JUST MAKING VISUAL INSPECTIONS TO SEE WHAT'S WRONG WITH EQUIPMENT.
STOP! SOB NO MORE! SOB
YOU WERE A (TSK-TSK) MERE PAWN OF GOLDPINKIE WHEN YOU NEVER USED YOUR TEST EQUIPMENT OR YOUR ORGANIZATIONAL TOOL SETS... YOU SEE, YOU WERE HYPNOTIZED!
HOW DO WE SNAP HIM OUT OF IT?

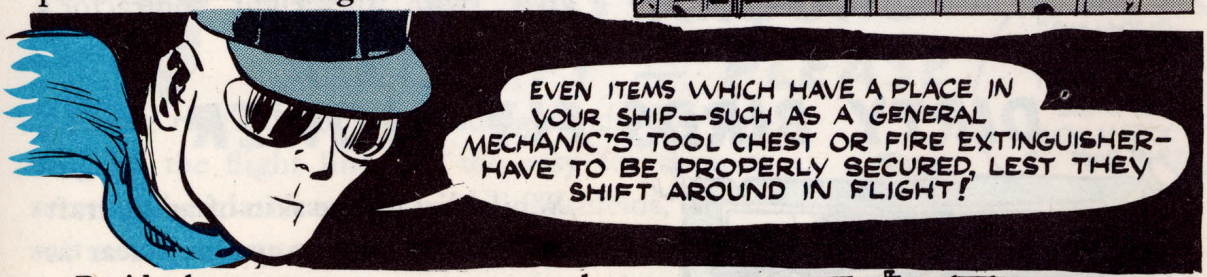
MY SPECIAL SHOCK METHOD...
SMACKK
HOW DOES ONE GET HYPNOTIZED?
HUH! WOT HAPPENED? OH HELLO, SARGE! WOTCHA DOIN' HERE?
Back at KVETCH...
COISES!! FOILED AGAIN BY A.U.N.T.S. GRR... GNASH!
CLICK
POW
YAHHH
AGHHHHH GET ME OUT! HALP... REPAIR MAN! MECHANIC! DO SOMETHING!
SORRY BOSS.
FOR YEARS YOU... GOLDPINKIE, HAVE TAUGHT US TO SWAP PARTS AND SUCH, AND SO NOW... WE HAVE LOST OUR SKILL AS MECHANICS FROM LACK OF USE.
And so, Goldpinkie was doomed by his own evil ways . . . A.U.N.T.S. triumphs again!
Tune in again and watch A.U.N.T.S. battle "KVETCH"!!


AIR MOBILITY
A RULE OF WEIGHT & BALANCE SAYS . . .
GARBAGE IS NOT BAGGAGE

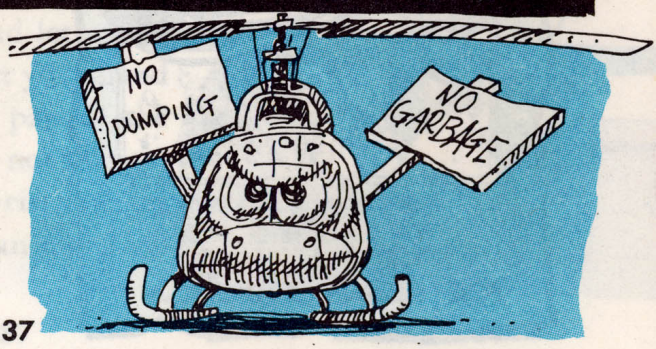
A baggage compartment is not a garbage compartment . . . whether it be an Iroquois (UH-1B) or any other type aircraft.

It's not the appearance so much, although a trashy look doesn't say much for your ship during inspections. It's the unknown weight penalty you pay in flight for that trash. You also take a chance on loose rags or papers interfering with internal operating components of your aircraft where the compartment does not have a solid partition surrounding it.

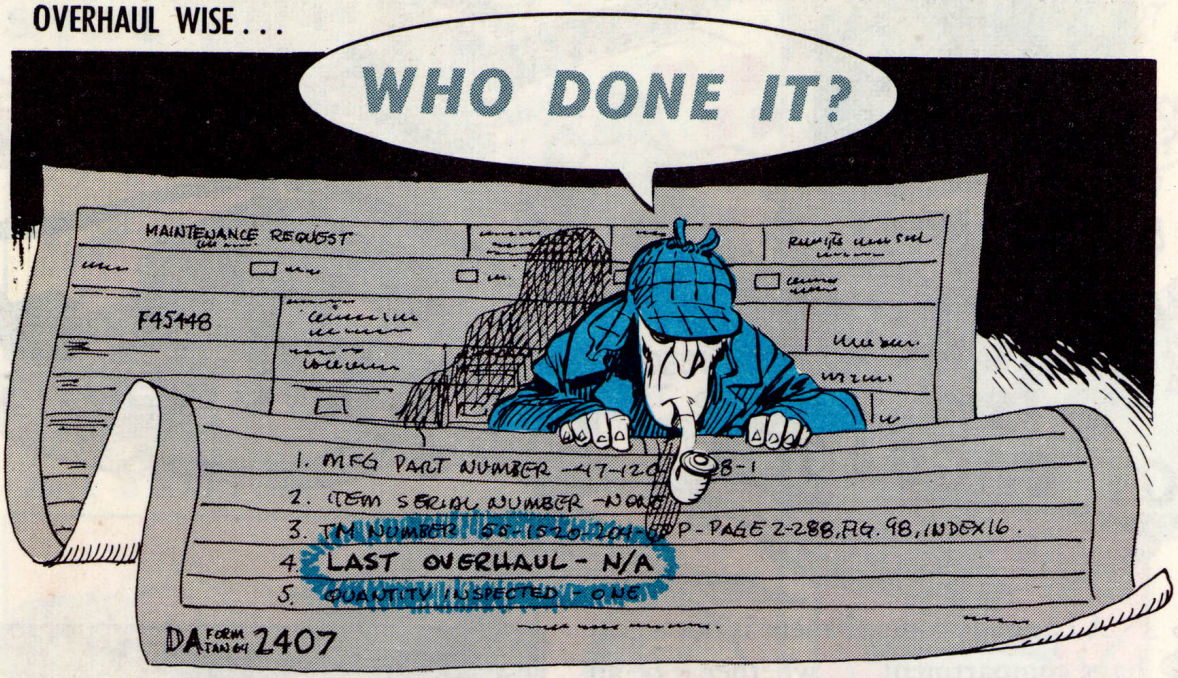




Besides baggage compartments, trash can accumulate in cockpits and cabins, or even in out-of-the-way places like a Huey heater compartment after the heating unit was removed. In other words, just about any open area of the fuselage is a potential dump.



OVERHAUL WISE . . .



There's nothing like a well informed Army. So the fact you just fired off a DA Form 2407 EIR on that aircraft part that just failed doesn't hack it unless you've done right by Block 35, item 4.

TM 38-750, para 3-7.4e(3)(b)4, says to "name" the activity that did the **last overhaul** or **manufacture.** Sure, you're allowed to put down "N/A" or "UNK" in there. But that doesn't help the types at the big maintenance hangar too much.

Remember, the prime manufacturer or contractor does not always overhaul his own items and the government does not always buy all the smaller parts from the prime manufacturer of the aircraft. So AVCOM has to know **who** to contact on each EIR.

No sense trying to stick the prime contractor with a failure that belongs in somebody else's lap. The best way to get the most out of your EIR is to "give" with the right contractor's name, sure 'nuff.

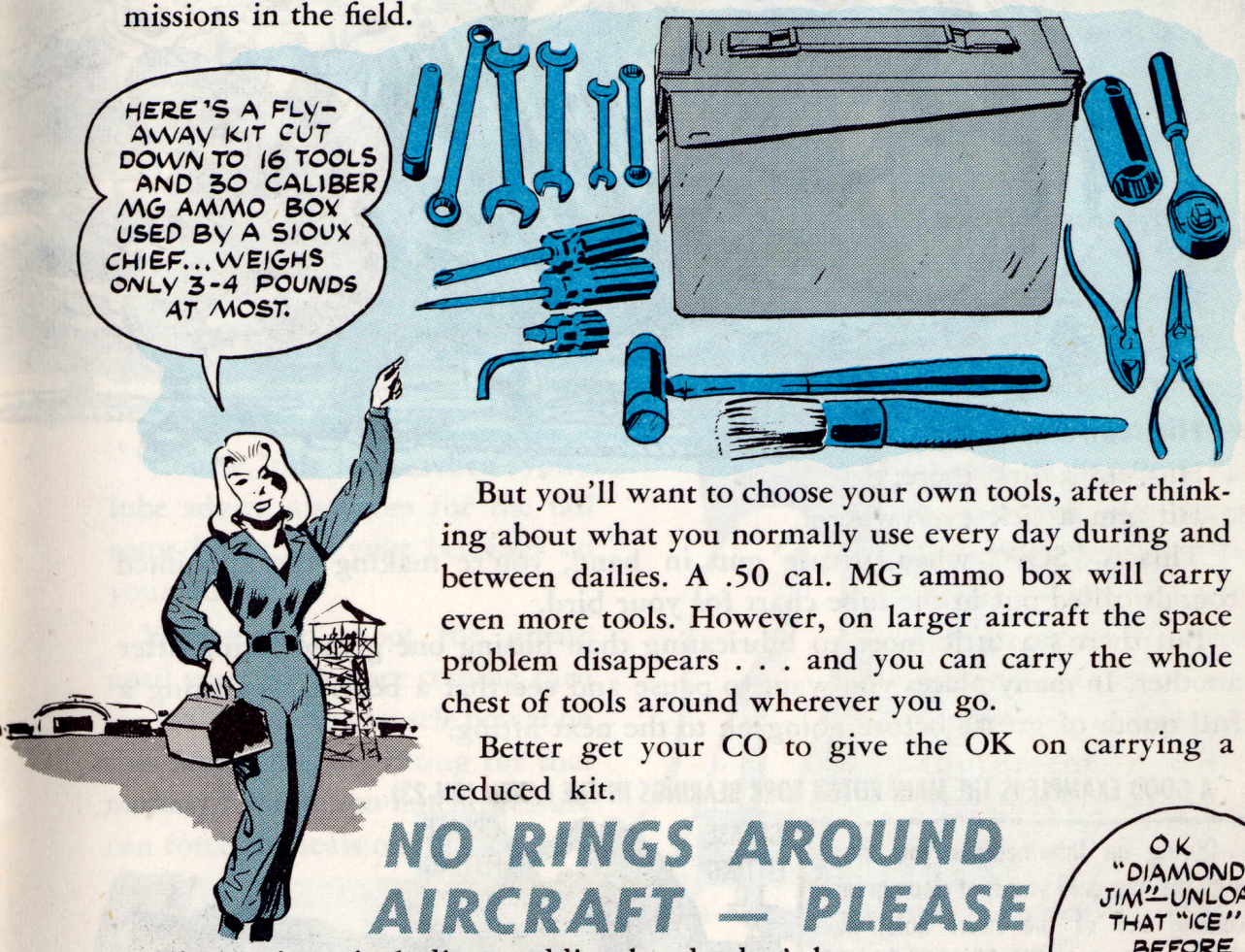
DIRTY BIRDS FLY SLOWER

While dirt on the skin of an aircraft won't slow it down anywhere near as much as extended flaps or external stores, it does have the same effect on a smaller scale. Over a long period of time you pay for an unclean bird with increased fuel consumption. Think on it awhile.

FLYAWAY TOOL KIT — FIELD STYLE

Shoving bulky general mechanic's tool chests into light aircraft cockpits has always been sort of a weighty problem during field exercises.

Stripped down flyaway tool kits are a lot easier to handle around outlying helipads and field strips. This is not a subject to be taken lightly when you stop to consider all the necessary field gear that has to accompany your Sioux (OH-13), Raven (OH-23) or Bird Dog (O-1) on combat, observation or admin missions in the field.

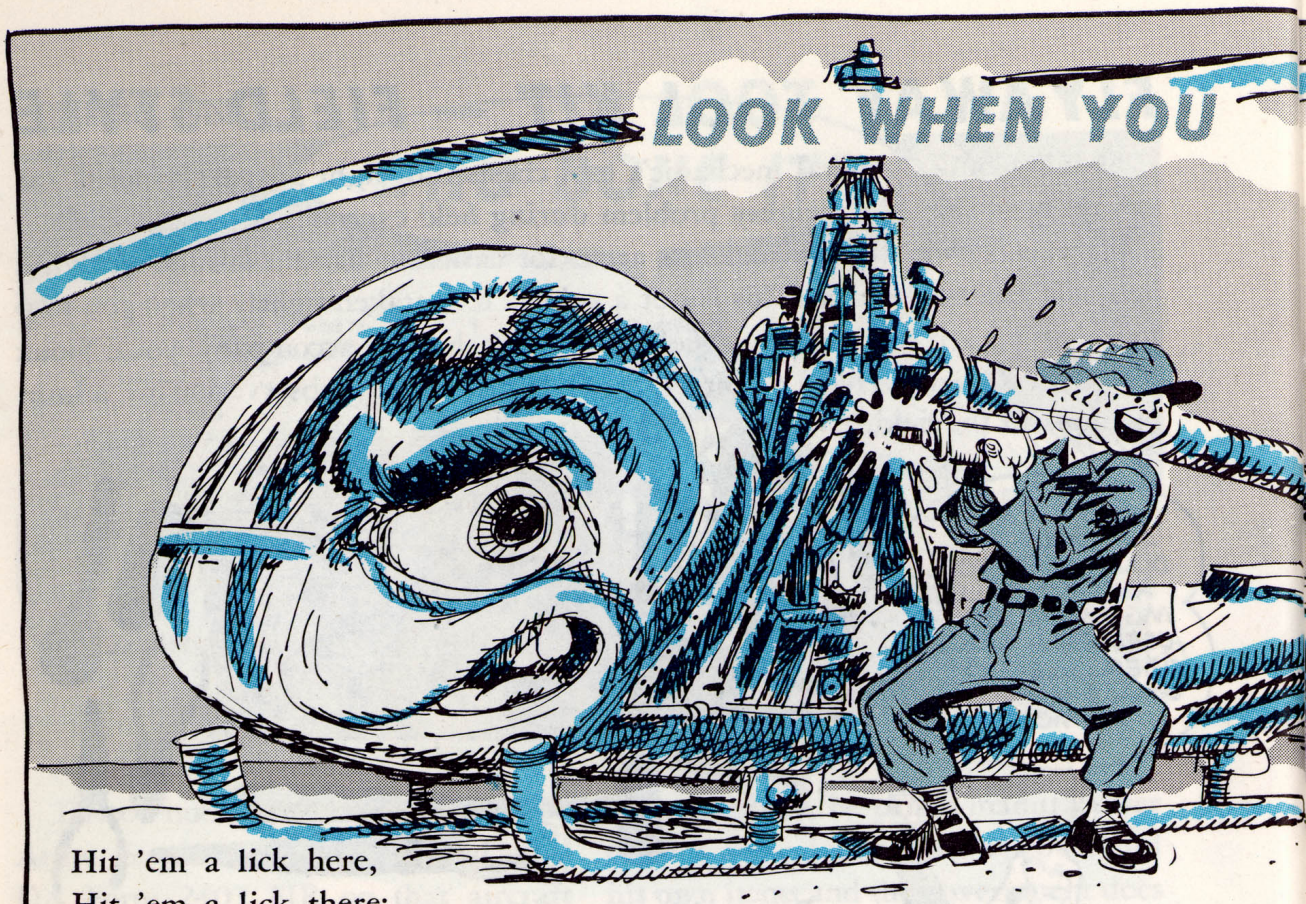


But you'll want to choose your own tools, after thinking about what you normally use every day during and between dailies. A .50 cal. MG ammo box will carry even more tools. However, on larger aircraft the space problem disappears . . . and you can carry the whole chest of tools around wherever you go.

Better get your CO to give the OK on carrying a reduced kit.

NO RINGS AROUND AIRCRAFT — PLEASE

Finger rings, including wedding bands, don't belong on the flight line. It's too easy for them to scratch fiberglass canopies and windshields, or the soft metal surfaces of the fuselage. Even on harder surfaces, a ring can nick the paint cover and let corrosion get a foothold. Besides, you can hurt your hand if that ring catches on some projecting part of the aircraft or hangs up in a tight corner . . . not to mention what can happen if any hand or wrist jewelry comes in contact with certain parts of an electrical system.



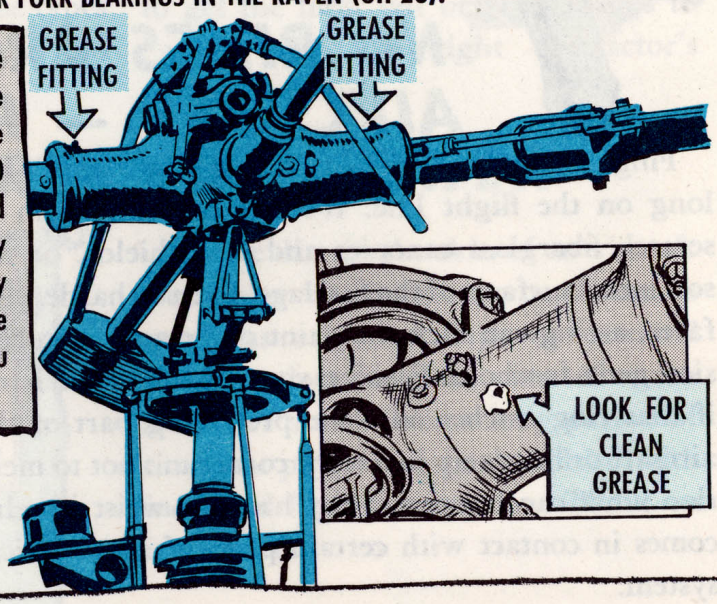
Hit 'em a lick here,
Hit 'em a lick there;
Hit 'em a lick everywhere!

This is "SOP" when, grease gun in hand, you're making the appointed rounds called out in the lube chart for your bird.

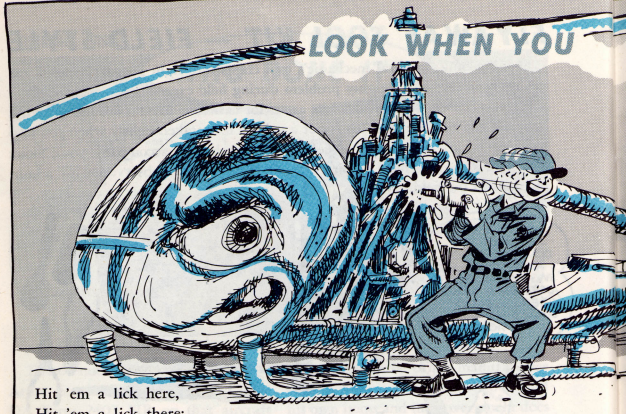
But there's a little more to lubricating than hitting one grease fitting after another. In many places you want to pause and see that a bearing is getting a full quota of grease before going on to the next fitting.

A GOOD EXAMPLE IS THE MAIN ROTOR FORK BEARINGS IN THE RAVEN (OH-23).

During an Intermediate you make with the gun until you spot clean grease coming out of the relief hole, like the lube chart in TM 55-1520-206-20 (Feb 65) says. A little "savvy," gained from experience, also comes in mighty handy here. Like — having your buddy rotate the collective in the cockpit while you're shooting the works to give you fully packed yoke bearings.



LOOK WHEN YOU LUBE, RUBE!



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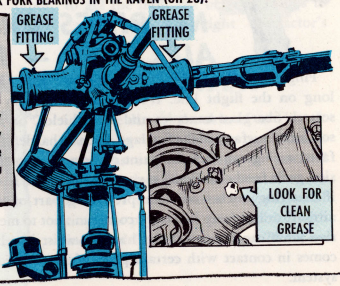
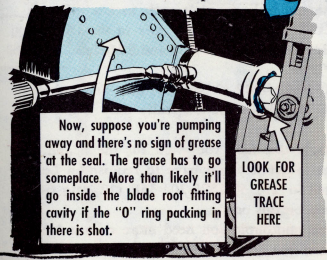


'Course, this look–when–you–lube advice also goes for the tail rotor blade and yoke bearings on your Raven.

You should shoot the grease until you spot a trace coming thru the seal. Don't use muscle power on this fitting (or any fitting for that matter) because too much pressure can force the seals out of place.



Now, suppose you're pumping away and there's no sign of grease at the seal. The grease has to go someplace. More than likely it'll go inside the blade root fitting cavity if the "O" ring packing in there is shot.

BLEACH, OK — OIL, NO!

Dear Windy,

I have observed several crew chiefs and aircraft mechanics storing hydraulic fluids in plastic (bleach) bottles and jugs. Is this practice accepted?

Capt J. W. F.

Dear Captain J. W. F.,

Hydraulic fluid should not be stored in a plastic (bleach) bottle or jug. These bottles, in many instances, contain small slivers of plastic which come from the manufacturing process. The slivers — and any other foreign matter in the container — can cause malfunctioning of hydraulic equipment in which clearances are very small.

Windy

You can tell a filled cavity right-off when the bird is cranked up. You'll get a high freq vibration in the rudder pedals from the out-of-balance blade.

So, what are other pitfalls to be on the lookout for during a lube job? The Service Notes in your bird lube chart list them — a little "savvy" will resist them.

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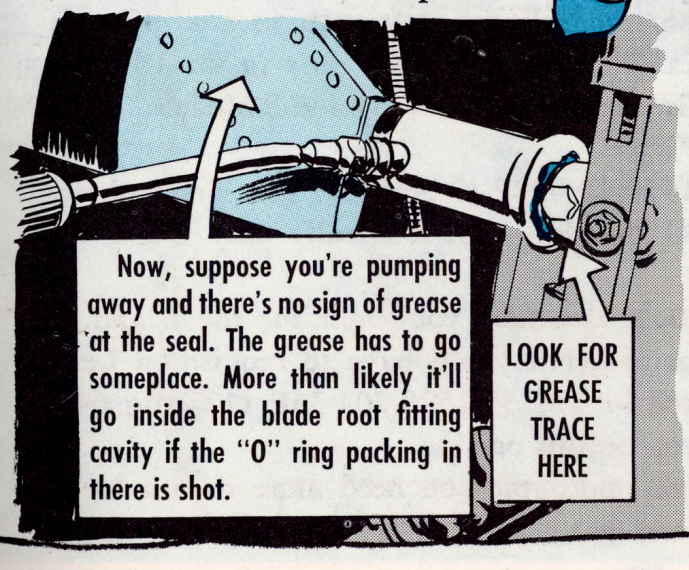

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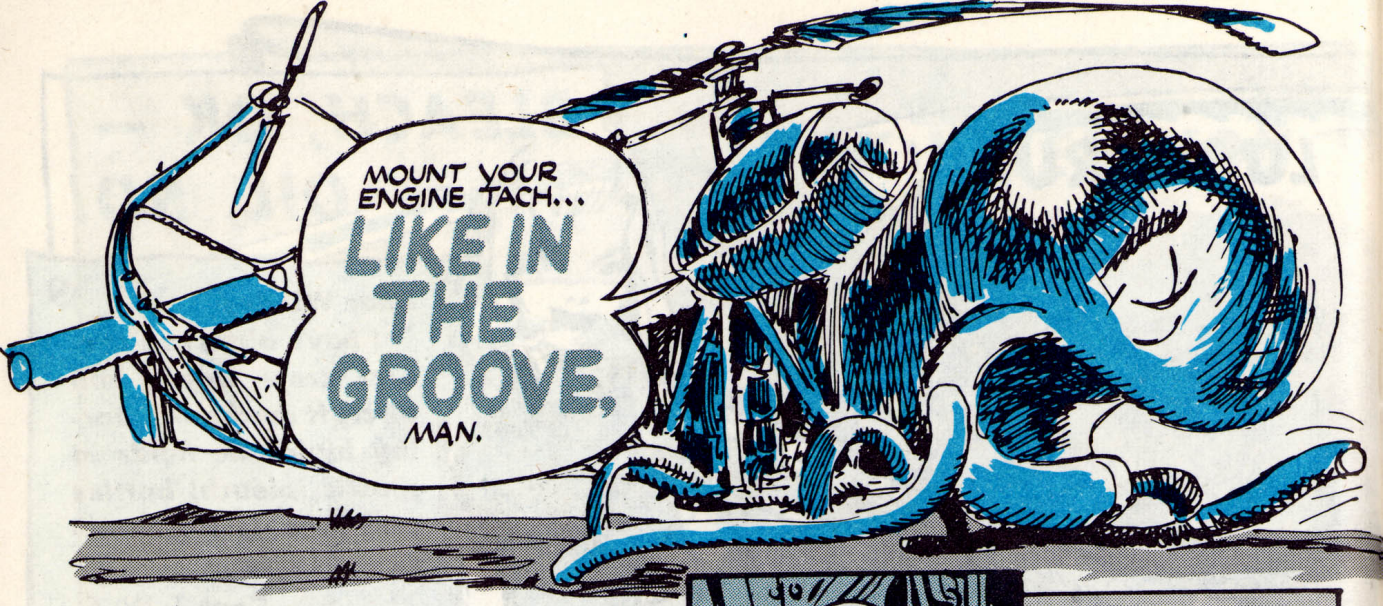
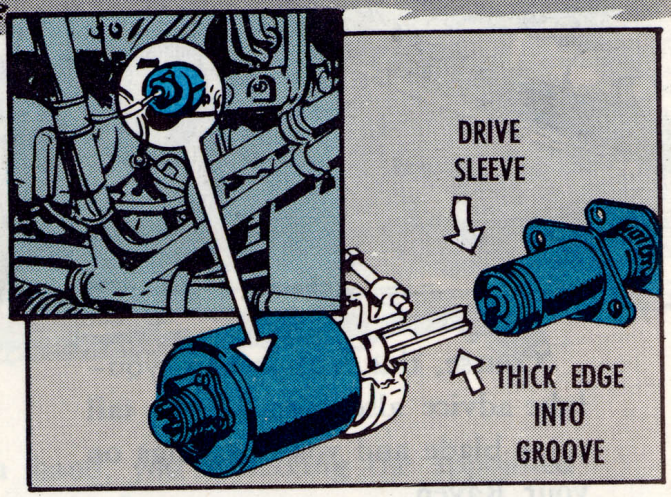


Comes the time when you have to change the engine tachometer generator on your Sioux (OH-13E, G) be sure you're "in the groove."

The groove isn't a mood generated by the latest rock 'n' roll hit. It's the slot in the tachometer drive sleeve, sure as shootin'.

When you put the replacement in according to TM 55-1520-204-20 (3



CHANGING A THERMOCOUPLE? LOOK-ALIKE WON'T

It's surprising how much look-alikes aren't alike . . . when you eye them side-by-side.

Take the engine thermocouple transmitter in your Sioux (OH-13).

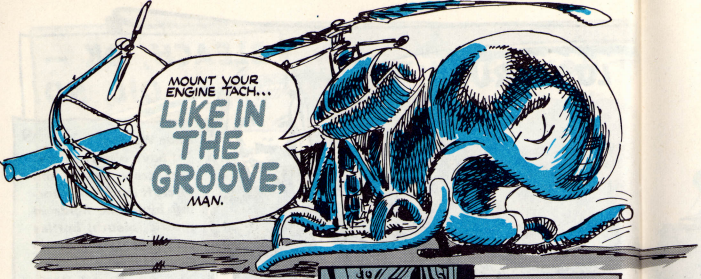
Either of these babies will fit into the cylinder, but each uses a different method of transferring temperatures. The one will work only in the OH-13E and G Models while the other one is used on the OH-13H and S Models.

So what's the rub?

Just this. Page 2-287 of TM 55-1520-204-20P (7 Aug 64) lists Transmitter, FSN 6685-557-3786, for the E and G Models — but it's really only usable on the H and S Models.

Transmitter, FSN 6685-526-8650, is the baby you want for the E and G Models. But there's a hitch! In order to get it you'll have to requisition Lead Assembly, FSN 6685-332-4665, listed in TM 55-1520-204-35P (12 Aug 64). Your support will cooperate with you on this one.

Yessir, when you change a bum thermocouple you need more than a look-alike, or even a fit-alike. You need one that works.



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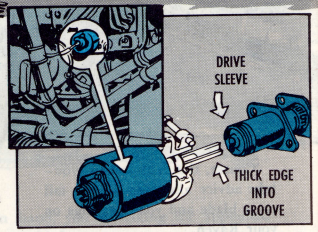
The groove isn't a mood generated by the latest rock 'n' roll hit. It's the slot in the tachometer drive sleeve, sure as shootin'.

When you put the replacement in according to TM 55-1520-204-20 (3 Apr 64) Para 12-102 you want to put the thick edge of the tachometer shaft into the drive sleeve slot. If you don't the job will have to be done over again, for real.



If the engine is cranked up and the unseated tachometer shaft is suddenly seated in the slot . . . snap!!! Another tachometer headed for exchange with a broken shaft.

So-o-o-o . . . shaft that groove, man!

CHANGING A THERMOCOUPLE? LOOK-ALIKE WON'T WORK

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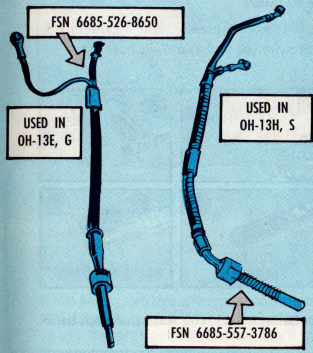


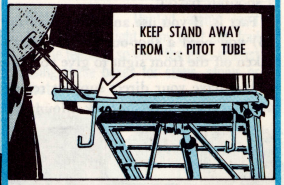
CARIBOU CHIEFS...

BEWARE THE PITOT TUBE

A puny pitot tube doesn't have a fighting chance against a sturdy Caribou (CV-2) crew chief's stand and a forgetful mechanic.

So you've got to be extra careful when preparing to work next to the firewall with the engine side cowling thrown back.

The safe way to approach an engine compartment job is with the stand jacked to a low position. This lets you see the tube extending out below the open cowling so the work stand won't strike the pitot tube as you maneuver it into position.



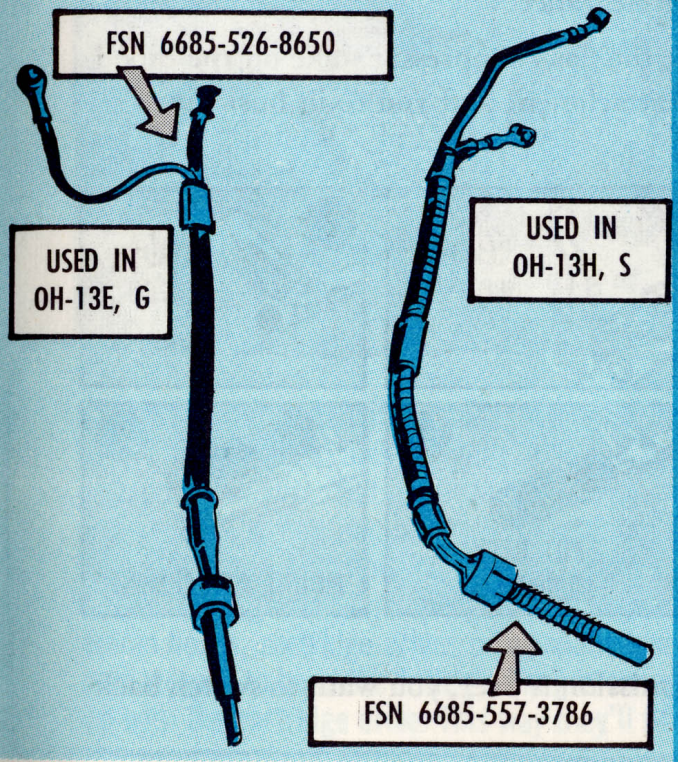
When you're certain the platform will clear the tube, jack it up to working level. If you use a rigid type stand instead of hydraulic, better round up a second man to watch the aft end and help you manhandle the stand away from the tube.

Apr 64) Para 12-102 you want to put the thick edge of the tachometer shaft into the drive sleeve slot. If you don't the job will have to be done over again, for real.

If the engine is cranked up and the unseated tachometer shaft is suddenly seated in the slot . . . snap!!! Another tachometer headed for exchange with a broken shaft.

So-o-o-o . . . shaft that groove, man!

WORK



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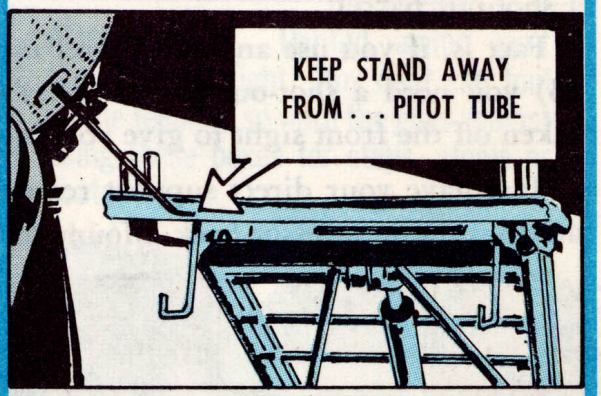

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M6 SUBSYSTEM:

BE A BARREL SWITCHER

There're times when it pays to be a switcher.

Like, say, a training mission calls for firing blank ammunition in your chopper's M6 armament subsystem.

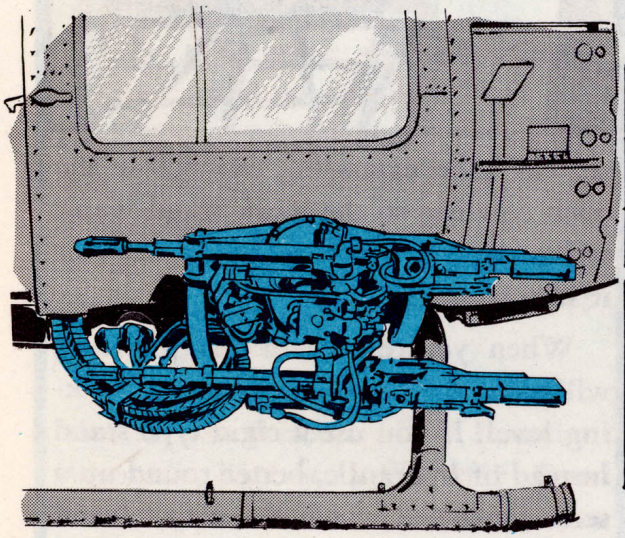
Any M60 ground gunner will tell you that he has to mount the M13 firing attachment to shoot blanks. That's because there isn't enough powder in the ammunition to give the needed recoil for automatic firing. The attachment partially blocks the barrel to give the necessary kick.

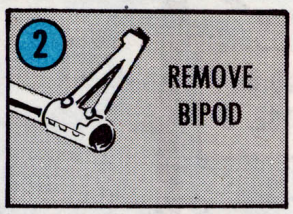
The problem with the M60C, of course, is that there's no barrel front sight to mount the M13 attachment on.

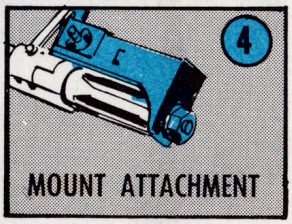
The solution? You guessed it—switch to an M60 barrel. You can even use a shot-out barrel!

Fact is, if you use an M60 barrel in the M2 subsystem on the Raven (OH-23) you need a shot-out barrel. That's because 3/4 to 1-in might have to be taken off the front sight to give you door clearance.

Just have your direct support remove the flash suppressor, take off the bipod and put the suppressor back. Mount the attachment and you're in business.

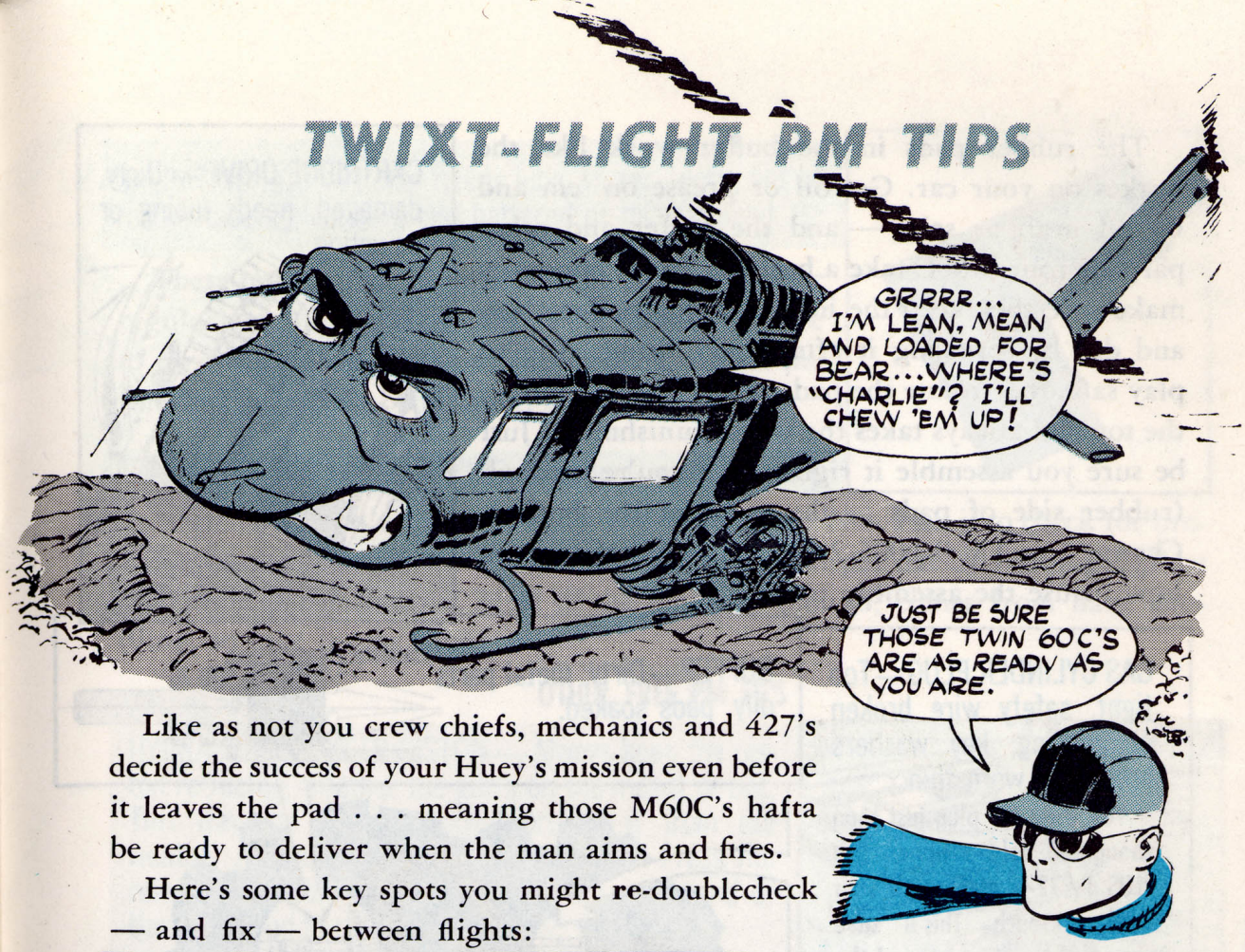






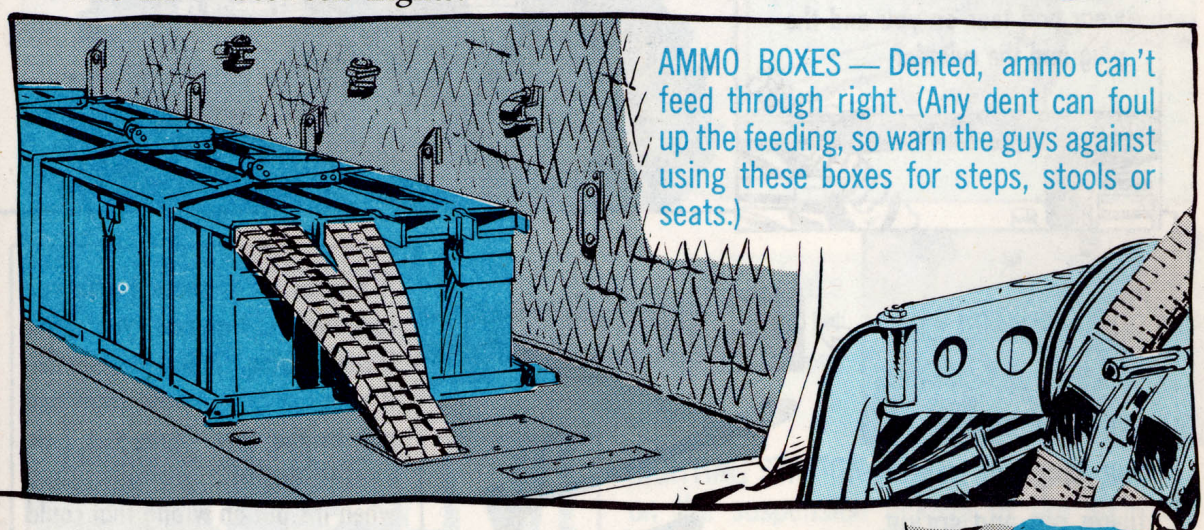
Remember, tho, once the blank firing mission is over, you want to switch back to your M60C barrel for live firing.

TWIXT-FLIGHT PM TIPS



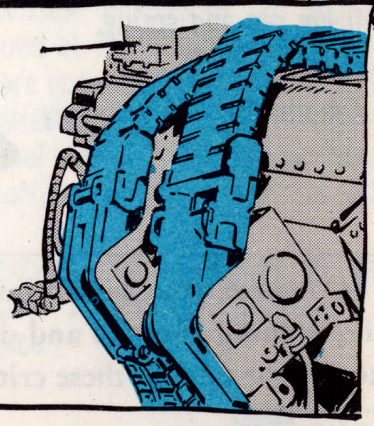
Like as not you crew chiefs, mechanics and 427's decide the success of your Huey's mission even before it leaves the pad . . . meaning those M60C's hafta be ready to deliver when the man aims and fires.

Here's some key spots you might re-doublecheck — and fix — between flights:



AMMO BOXES — Dented, ammo can't feed through right. (Any dent can foul up the feeding, so warn the guys against using these boxes for steps, stools or seats.)

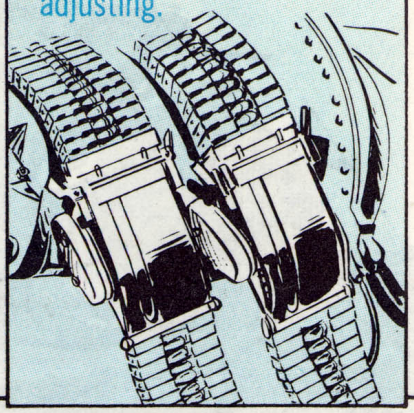
CHUTES — Clogged with stones, sticks 'n' stuff churned up by the chopper; link tongues blocking ammo; chuting clamps too tight; chuting flexed (meaning the joints are badly worn); wrong number of links in chute (pages 6-7 of your TM'll tell you how many each chute's supposed to have); chuting won't line up right with connecting points in ammo boxes, cartridge drives or weapons (use your adjustable wrench to bend the fitting's flanges enough to line 'em up with the cartridge drive. This way they'll fit everywhere.)



PS MORE

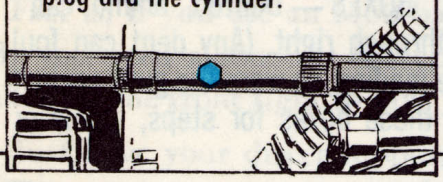
The rubber pads in the buffer work like the brakes on your car. Get oil or grease on 'em and they'll grab or seize — and the buffer and other parts of your M60C take a beating. Smart operators make sure they keep the insides of the buffer clean and dry by servicing it after every firing. And to play safe, they rotate the pads after cleaning, too — the top pad always takes the worst punishment. Just be sure you assemble it right when you're through (rubber side of pads to the front of the buffer). Change 1 to TM 9-1005-243-12 (Oct 63) shows you how to use the assembly tool.

CARTRIDGE DRIVE — Dirty, damaged, needs lubing or adjusting.

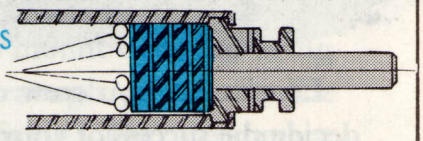


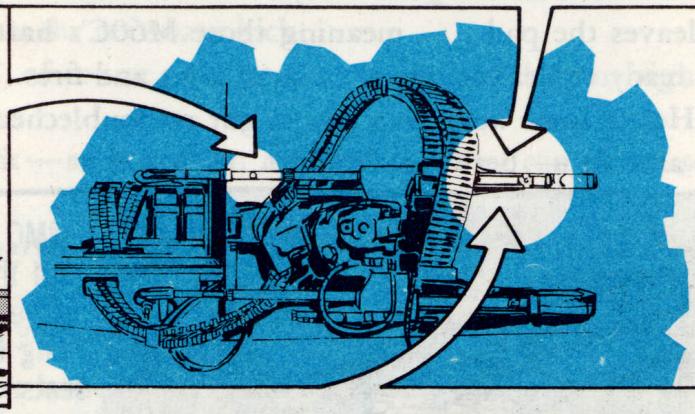
GAS CYLINDER PLUG—Too tight, safety wire broken or missing; key washers broken or worn thin.

You want the plug just snug enough to hold — finger-tight PLUS 1/32-in more with your combo wrench. This'll save wear and tear on you and the plug and the cylinder.

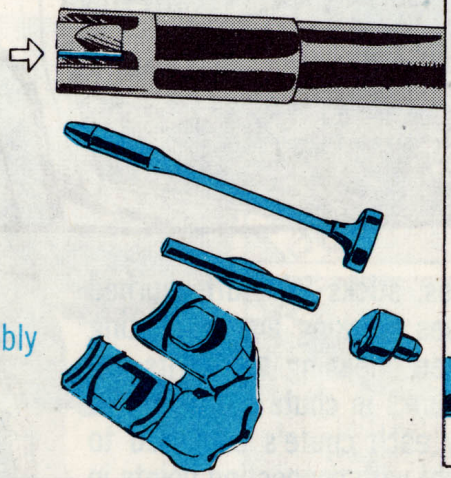


BUFFER—Dirty, metal parts oily, pads soaked.

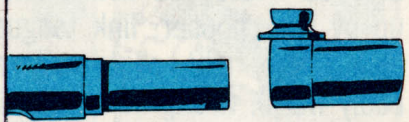




BOLT ASSEMBLY — Locking lugs chipped, extractor broken, bolt plug pin missing; firing pin and spring busted; actuator (roller) assembly put on wrong.

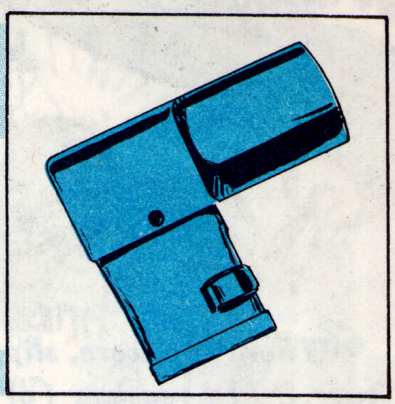


Any or all of these'll give you real trouble. However, you won't lose that plug pin if you assemble it with the roller to the front and not to the rear. There's a hole directly opposite the roller shaft when it's put on wrong that could let the pin slip through.



O'course, your bolt'll last lots longer if you keep up with your homework — like stoning chipped and deformed lugs that do harm to the barrel sockets. So, keep close tabs on these critters.

OPERATING ROD — Roller needs lube, frozen, worn, out of round, tapered; forward end battered or mushroomed.



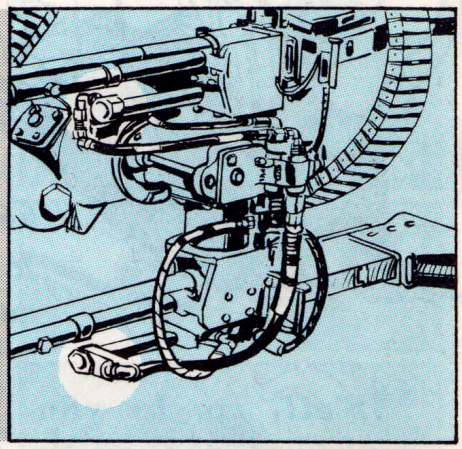
These're the main parts to watch. Lube the roller regularly with MIL-L-46000. You should be able to turn the roller with your finger. You can fix the forward part easy by stoning.

OPERATING ROD DRIVE SPRING — Kinked, worn, broken.

Measure it. If it's not at least 24-3/4-in long, it's NG. Flex it to check for broken strands, and eye it real close for flat spots that got flat by rubbing against the inside of the receiver. Most of the kinking, though, comes from hard handling, so take it easy, huh?

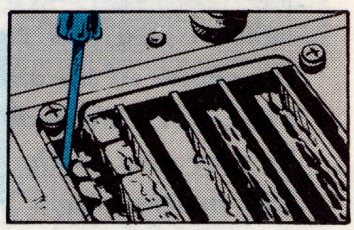
OTHER FREE PM TIPS

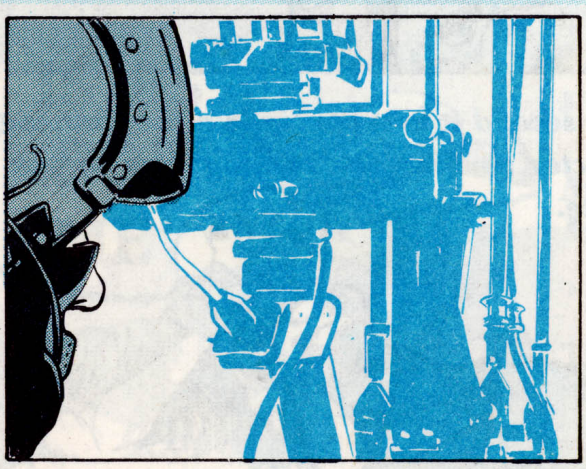
HYDRAULIC CHARGER PISTON — Always keep the piston retracted, whether the gun's on the mount or not. This way the charger body'll protect it from the weather and bumping into by clumsy guys. Press the release assembly in the center of the outer end of the piston rod to retract it.



HYDRAULIC LINES — Make a habit of eyeballing 'em as you go about your business. Even a tiny leak in a line could drain the Huey's oil reserve and force a landing heck-knows-where.

STOW VARIABLE RESISTORS-CONTROL PANEL — Don't make any more adjustments than you have to . . . and be sure to let the electrical system warm up (say, about 15 minutes) before you do any adjusting.





SIGHTING STATION—Keep the hexagon nuts on the suspension linkage of the sighting station torqued at 12-15 inch-pounds. Since the M60C's are boresighted in relation to the command variable resistors in the sighting station, it's real important to have all linkage in the supporting arms torqued the same amount.

(Also, doublecheck the procedure in para 11b(2) of your -12 TM for adjustment of counter-balance.)

END

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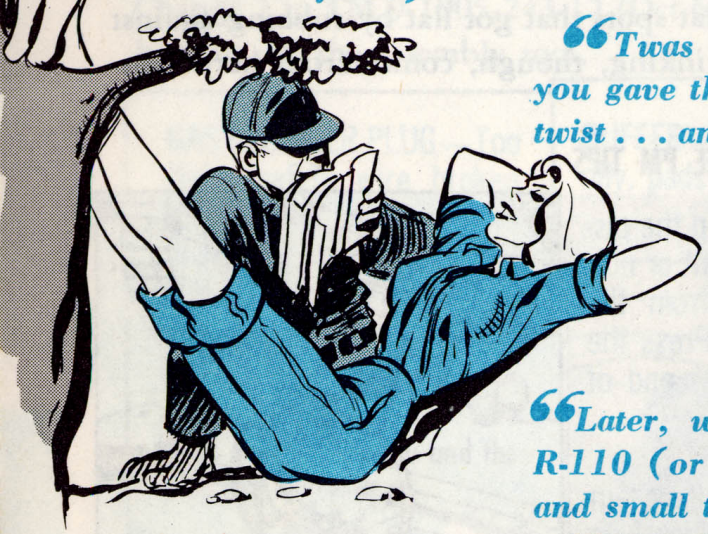

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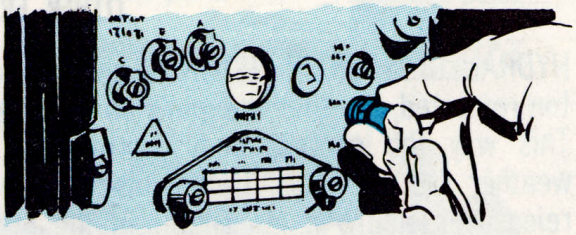
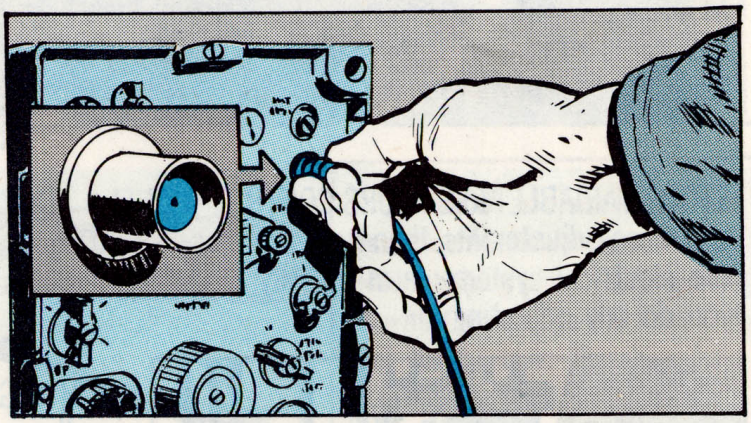


"Later, when things began to happen, your R-110 (or RT, etc.) wouldn't pull in the large and small talk.

"Well, maybe you push-tilted the plastic core free of its seat in the center of the antenna jack. Even normal wear 'n' tear gets to the core, but mistreatment really murders it.



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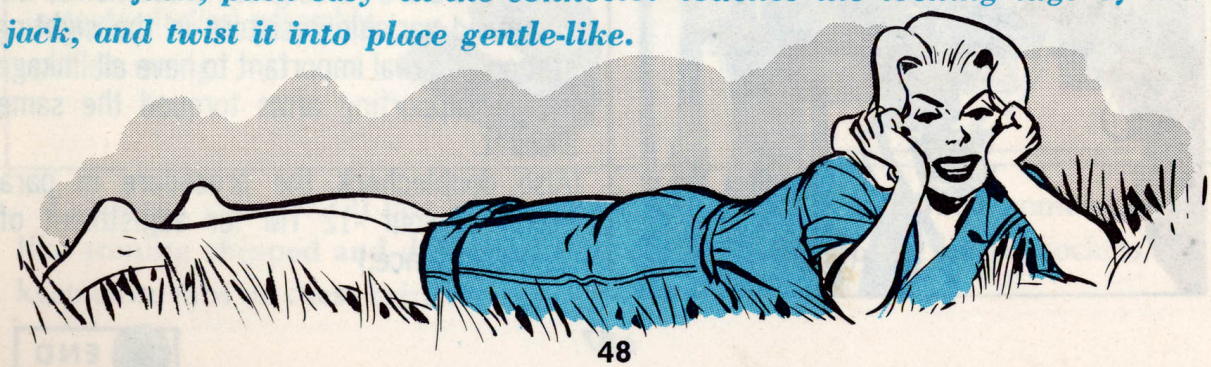

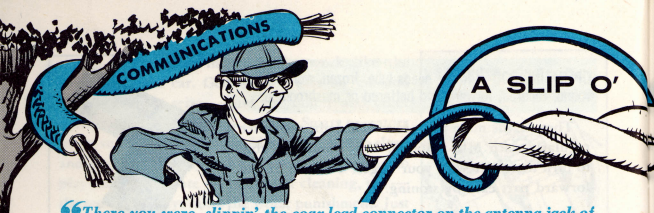

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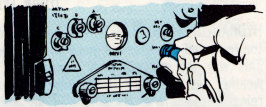

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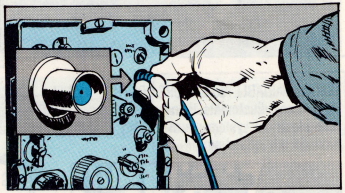

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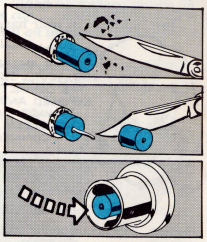
"When you remove the connector, don't grab it by the wires. Holding it by anything but the connector itself can bust up the jack . . . or loosen the coax wires . . . or break the wires off. Loose or broken wires, natcherly, means you get no RF output.

"Take the connector off and put it on in a straight line with the jack, and that jack'll give you a lot of service.

"If you've really gotta use that receiver despite a busted insulator core, you might try this emergency field fix: Skin a piece of RG-8 cable down to the rubber insulation and cut off a half-inch piece of the insulation. Slip it onto the center pin of the antenna jack . . . and you can transmit or receive."



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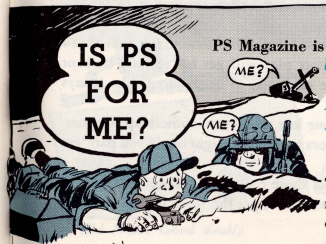

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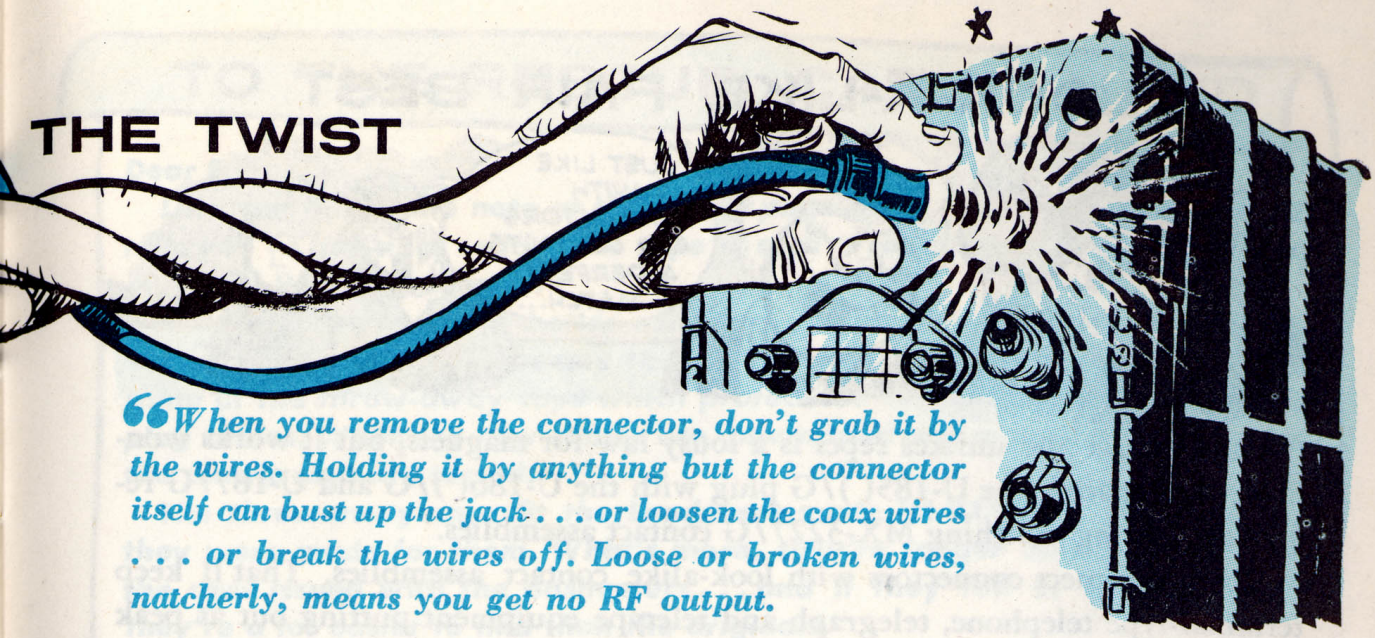
Sometimes PS mentions "Support." That means Field Maintenance, the direct support unit in your division or on your post.

THE TWIST



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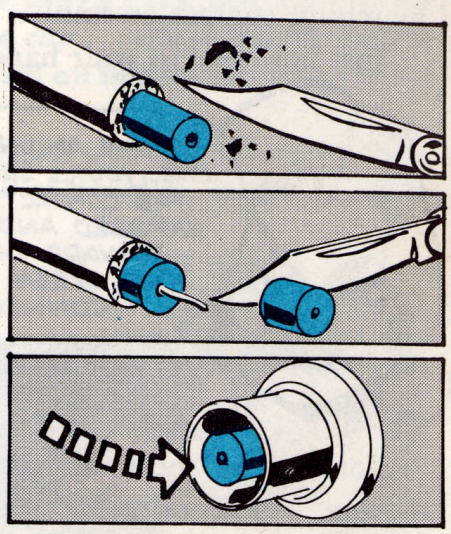

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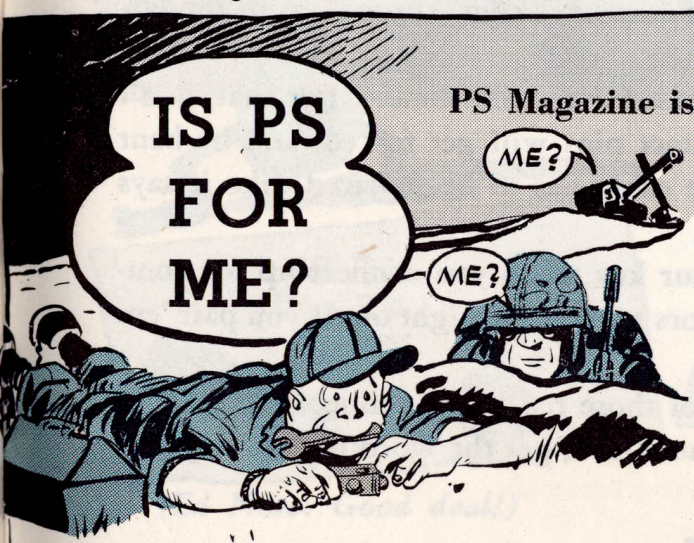

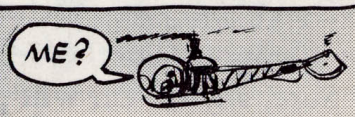

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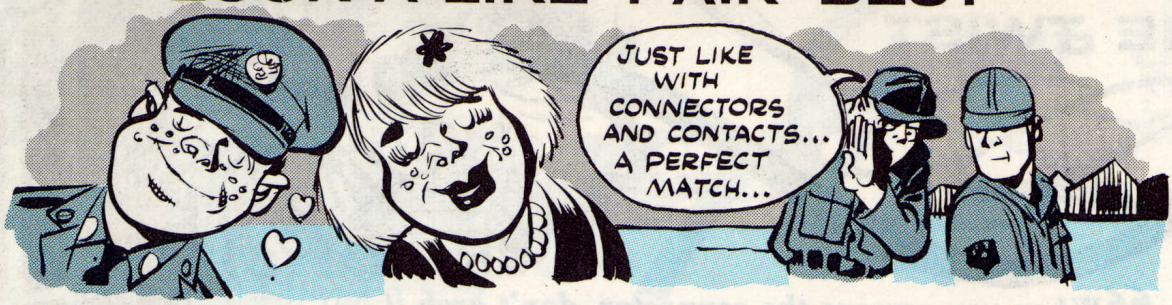
LOOK-A-LIKE PAIR BEST

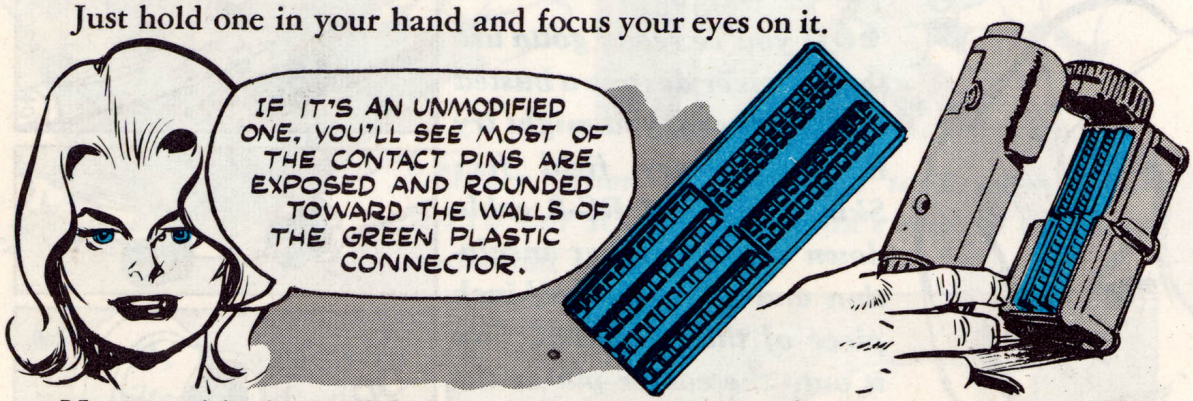


Likes attract and unlikes repel is a lousy law for magnets, but it works wonders when mating the U-185( )/G plug with the U-186( )/G and U-187/G receptacle having matching MX-3227/G contact assemblies.

Always connect connectors with look-alike contact assemblies. That'll keep terminal-type telephone, telegraph and teletype equipment putting out at peak efficiency along your 26-pair cables.

It's no sweat to see the difference between the old and new connector and matching contact assembly.

Just hold one in your hand and focus your eyes on it.



Not so with the modified ones marked MX-3227/G. Using this same eyeing routine, you'll notice the peaks of the pins are covered by a rectangular piece of green or gray plastic. You also ought to find "MWO 11-5935-205-35/1" (Dec 63) stamped or painted nearby.

Don't jump to conclusions, though. It may have come through with the latest connectors marked — MX-3227/G.

Sure, any of 'em will pair up . . . at least for the first time. After that, don't take bets, 'cause one or more of those contact pins will get forced, and be bent or broken off. And that means the whole cable has to be replaced, like it says in SB 11-569 (Dec 63).

While we're on the subject, care is your key when you connect up for communicating. Gently squeeze the connectors together straight on. If you pair 'em up at an angle, you'll damage 'em.

Another thing, if your outfit has any of those receptacle connectors and contact assemblies around that haven't been modified, get the word to your support unit. They'll take care of the job.

TO THE RESCUE, CAP IN HAND

Dear Editor,

Like you know, the note at the top of page 8, TM 11-6665-214-10 (Nov 62) tells you to use clear cellophane tape'n' such to replace lost or damaged caps of the IM-93/UD dosimeter.

We think we've got a better solution . . . and it's easy to come by.

Just point your boondockers toward the nearest motor pool and scrounge some of the throw-away caps which protect the ceramic ends of new spark-plug cables. When the new cables are unwrapped and connected to the plugs, the plastic caps are tossed.

The throw-away caps fit the Landsverk-made IM-93A/UD dosimeters like they were made for them. What's more, they're longer and stronger than the caps issued with the dosimeters . . . and if they fall or are misplaced, they're a lot easier to find than the originals.

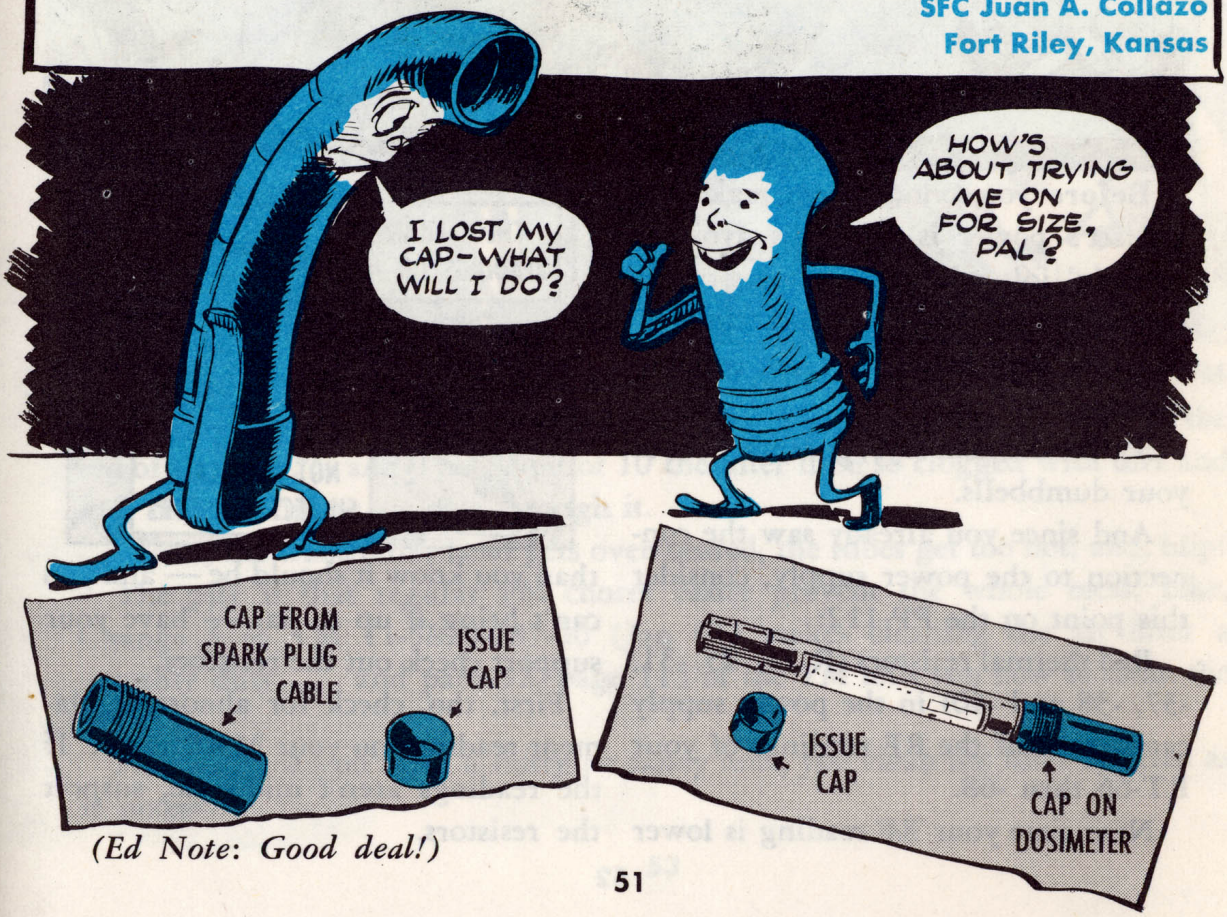
The real bonus is that you can read the dosimeter roentgen scale without removing the caps . . . just like the originals.

One caution: The IM-147 and the Bendix-made IM-93's are a little too fat for the sparkplug wire cap. Those models split the cap . . . which means you've got to wrap it with cellophane tape. But, that's still an improvement over the cellophane tape by itself.

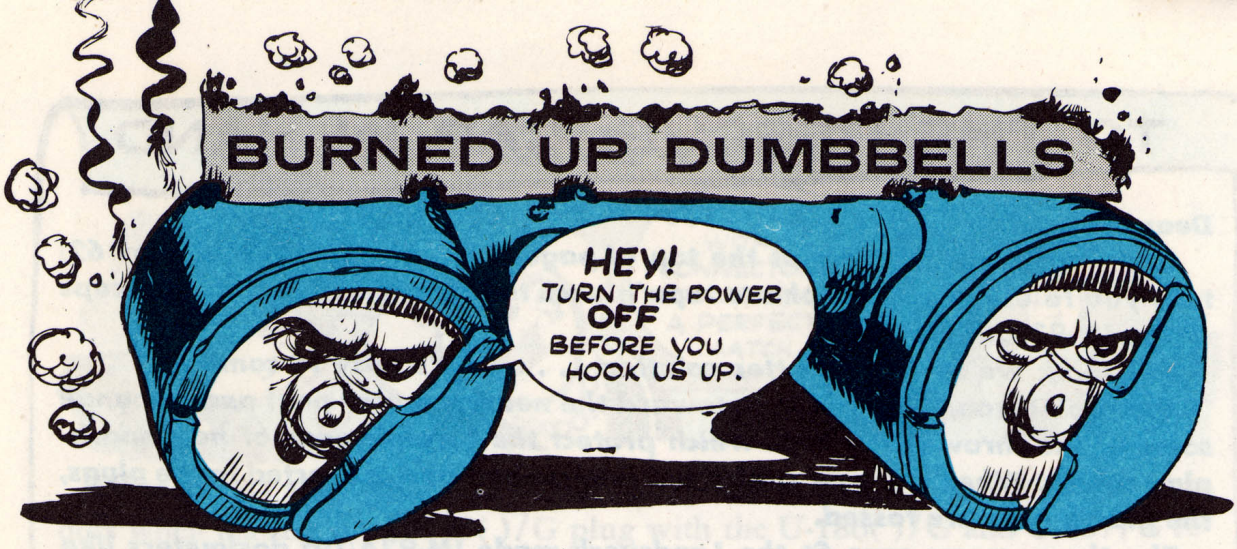
Safest caution is: If you get resistance, you can bet a nickel the cap'll split.

Like you know, the dosimeter caps are otherwise hard to come by, since they're not in the supply system.

SFC Juan A. Collazo
Fort Riley, Kansas



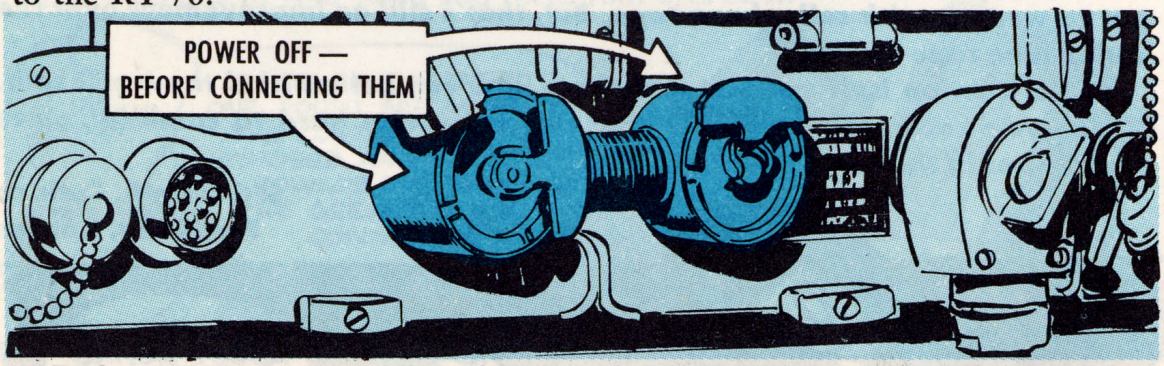
(Ed Note: Good deal!)



Don't let the dumbbells of your AN/GRC-3 series radio sets make you look like one.

That kinda situation can burn up both you and the dumbbell — in different ways.

Like you know, the dumbbells (CX-1211 and CX-1213 cables) connect the power supply to the RT-66, -68 receiver-transmitters and the AM-65 amplifier to the RT-70.



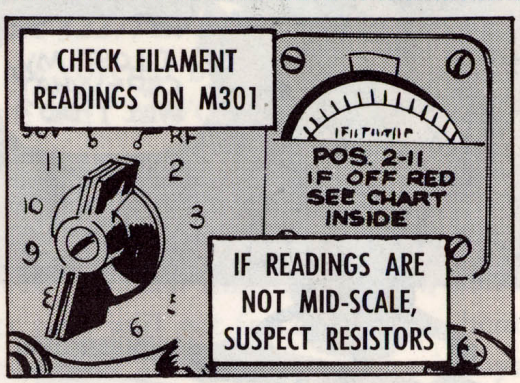
Before you connect them, make sure the set's power is off. This avoids a revoltin' jolt whereby the pins of the connectors get fried . . . sometimes so bad that they keep you from communicating.

So like the man says, get smart about your dumbbells.

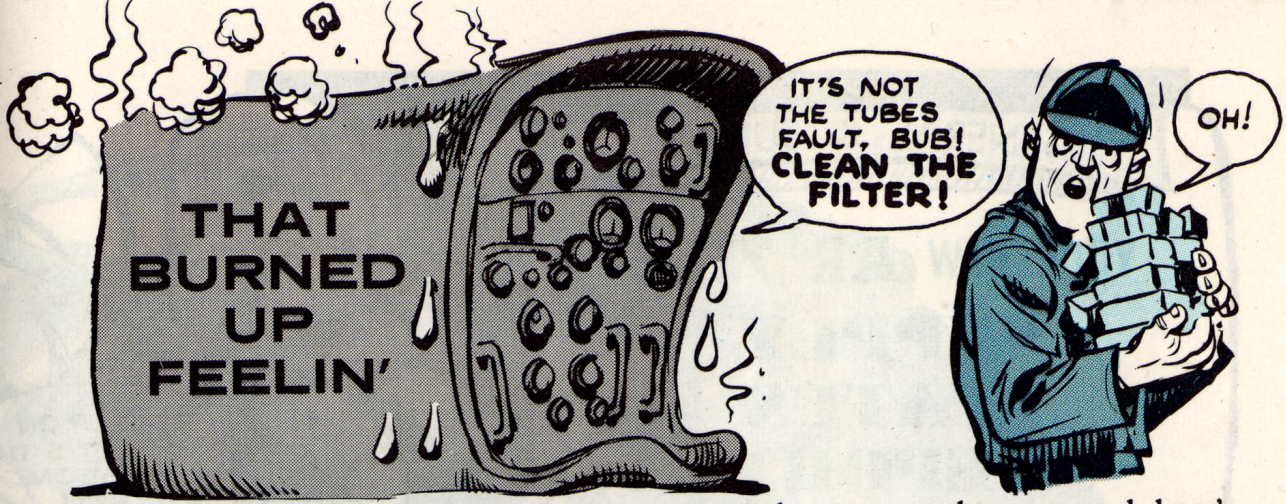
And since you already saw the connection to the power supply, consider this point on the PP-112:

Bad thermal resistors (R-24, -25, -31, -37, -38 and -40) in the power supply can throw off the RF readings of your RT-66 thru -68.

Next time your RF reading is lower than you know it should be — and you can't bring it up to par — have your support check out the resistors.



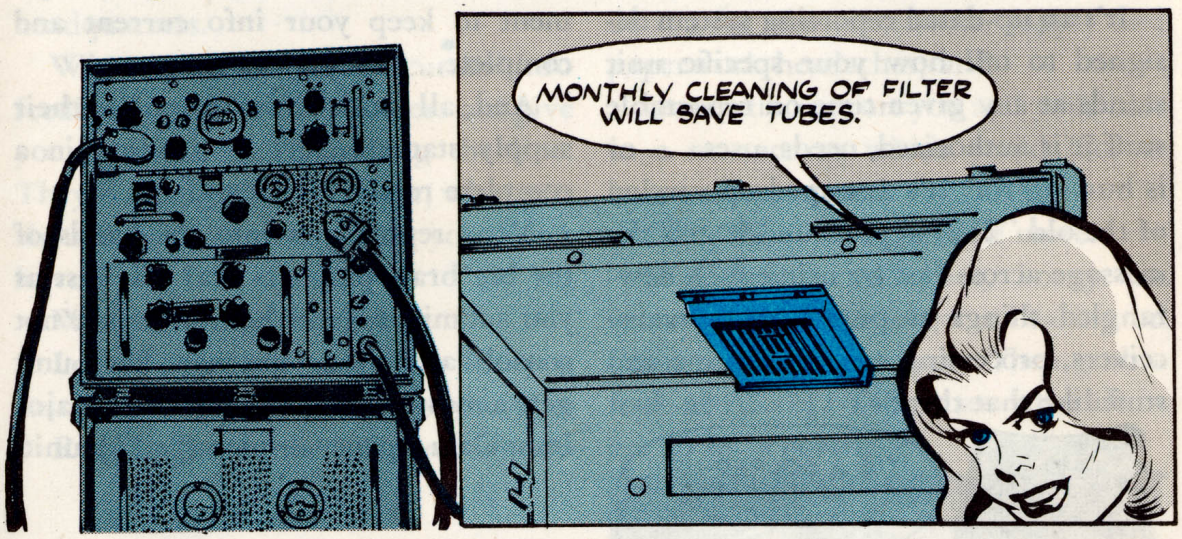
First, tho, check for abnormal filament readings on your M301 meter. If the readings aren't mid-scale, suspect the resistors.



Maybe smoke hasn't gotten in your eyes yet, but you can bet too much heat's gettin' to your T-302 transmitter if you're burnin' out more than your quota of tubes.

The filter's the thing . . . whether you inhale or not. But first, a word from Toby the tube tender.

Watch out for a hot-headed transmitter in your AN/TRC-24 radio set if the T-302 or -302A tube types (like 7259, 4X150A and 4X150G) and the 3CX100-A5 start goin' bad a lot faster'n they ought to.

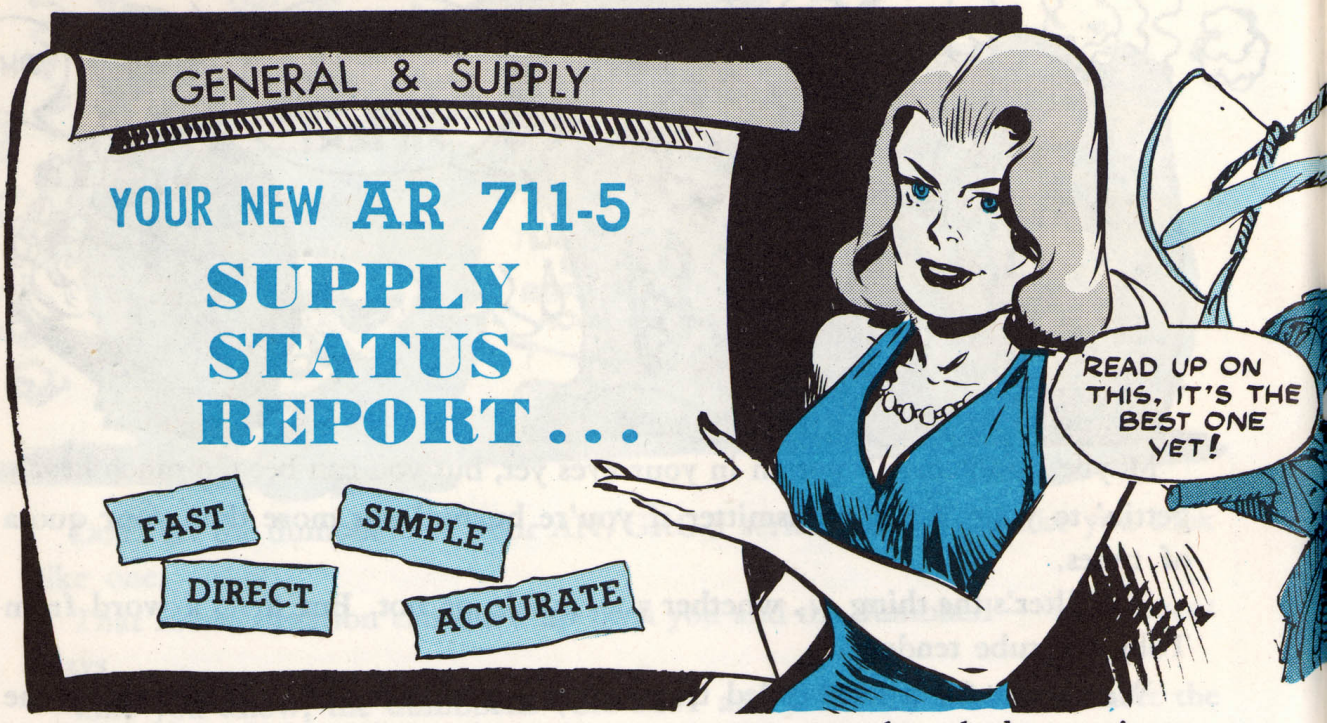


You can cool that action quick most times with a routine organizational PM chore. Slide the transmitter from its case, take a gander at the air filter in the top of the case . . . and 9 times out of 10 the filter'll be so clogged with dirt and dust that almost no air gets through it.

Result, the transmitter head gets over-heated, the tubes get too hot, and, blip!

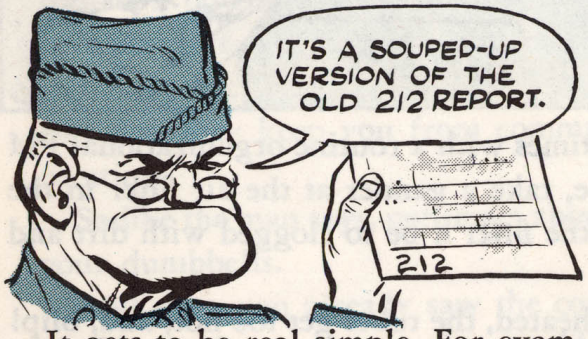
The pity is that regular PM chores easily prevent the whole mess. Like, Change 5 to TM 11-5820-287-20 (Jan 61) makes cleaning the air filter a monthly duty . . . and para 52, page 113 of the TM tells you how to clean the filter.

Natcherly, if you're in a dusty or sandy area, you clean the filter as often as is necessary.



So what's with the new supply status report?

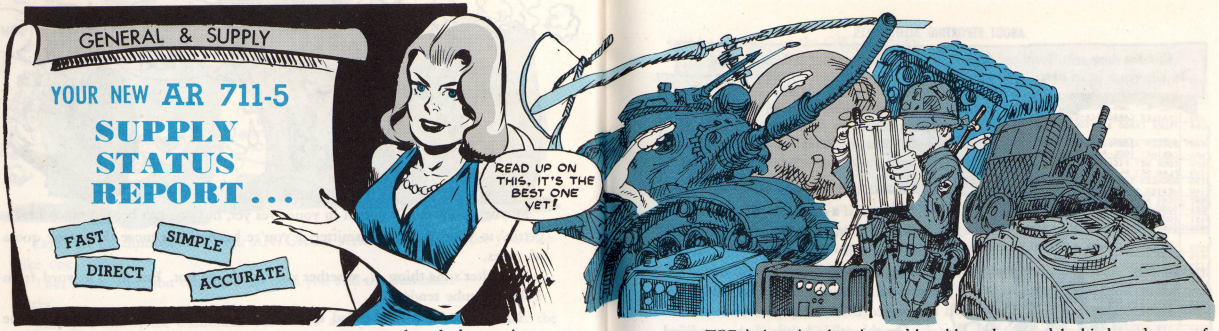
It's an up-dated reporting system designed to tell how your specific unit stands at any given time on reportable stuff it is authorized, needs, uses . . . or is hurting for. It's a souped-up version of the old "212" report, and it gets the message across fast by using such newfangled things as punch-cards, transceivers, processing equipment . . . and stuff like that there.



It gets to be real simple. For example, if you're stateside, Active Army, Guard or Reserve, you submit an initial report, and afterwards you report only the changes in your supply status—about an hour's work each month for the average unit. From time to time, of course, you may be asked to review a complete list of your reportable equipment to keep your info current and complete.

And, all units overseas up-date their supply status report by sending in a complete report quarterly.

Your report gets into the hands of the big brass planners real fast just as you submit it since the reports are not consolidated along the way. Each unit gets a master file at the National Major Item Data Agency—identified by unit,



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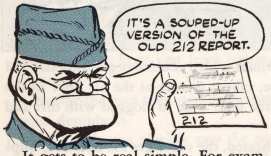

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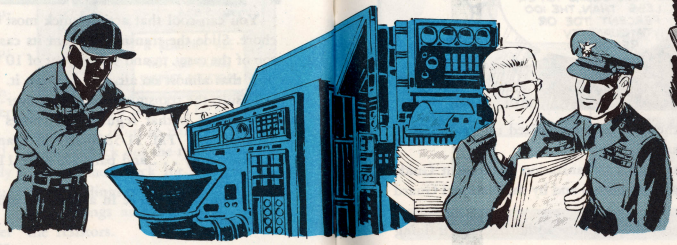


With up-dated and accurate info feeding in, the supply planners can give you better service all along the line. They'll know what you have, what you should have . . . and what you don't have.

With this info, they can:

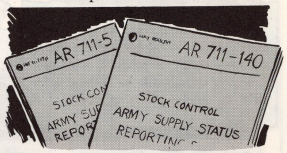
Locate a replacement item for you fast (maybe from a unit near you);

Reduce the number of non-compatible makes, models, kinds and types of equipment in your unit—and thus reduce a lot of maintenance, supply and paperwork headaches; and

Generally support you and your unit in a manner to which you'd like to become accustomed.

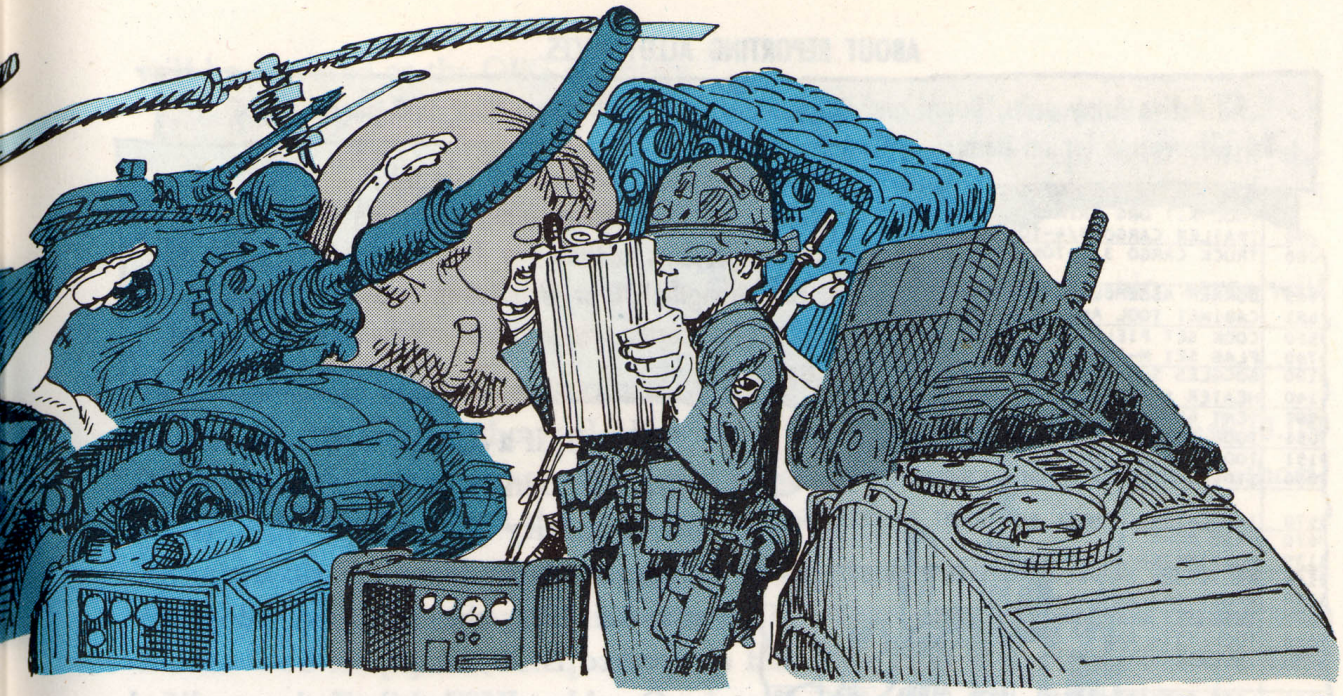
OK, OK, OK! So tell me more!

Well, wrap your hot, horny fist around AR 711-5 to get a bearing on the reporting procedures. Then grab a look at AR 711-140 to see what items are to be reported.



Active Army outfits report only those items in the AR. National Guard and Reserve units report the AR items plus the other items listed in the supply status SOP of their higher headquarters (see para 6g and 6m, AR 711-5).

PS MORE



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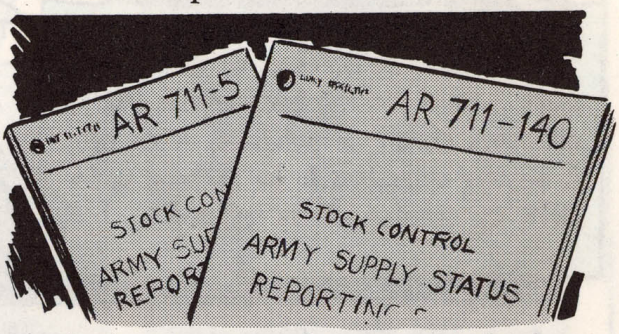

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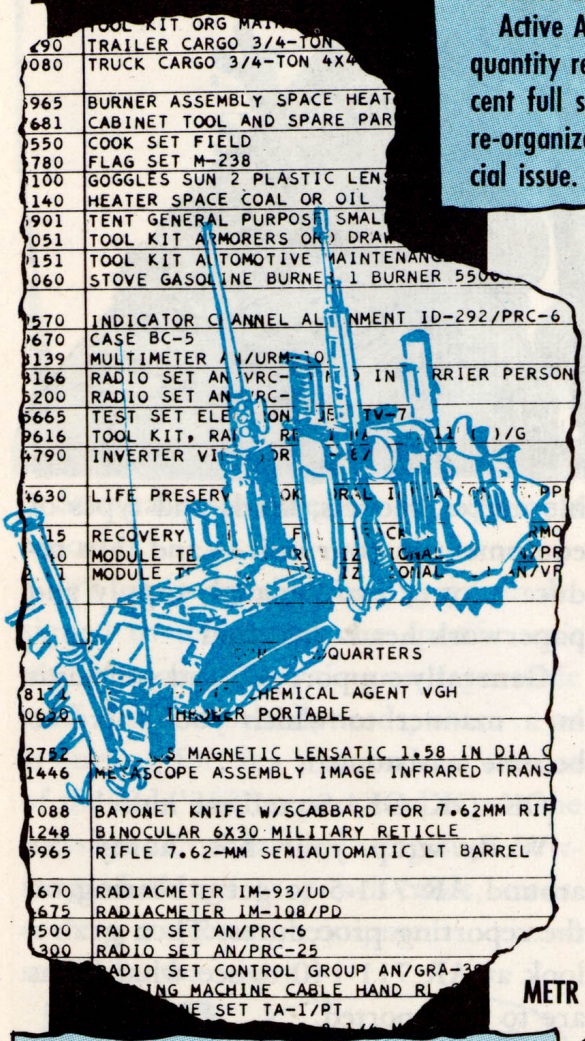
P.S MORE

ABOUT REPORTING ALLOWANCES

All Active Army units, Guard and Reserve outfits always report their 100 percent TOE or TA allowance for an item.

Other allowances are reported like this:

Active Army units report current operating allowances. This quantity represents additions or deletions made to a 100 per cent full strength TOE or TA allowance, by an activation or re-organization order, by a movement document or by special issue.



Active Army units report an item's Minimum Essential Training Requirements (METR) allowance exactly as published. If an item is actually authorized to be on hand under METR, the quantity will be reported.

That is, if a change adds 50 to a basic authorization of 100 items, the modified quantity reported is 150. If the change cuts 50 from a basic authorization of 100, the modified allowance reported is 50, etc.

On the other hand, if the modified quantity is equal to the 100 per cent TOE or TA quantity, the identical quantity is reported for both allowances.

And, in any case, a unit's report will show the quantity allowed under each authorization, or else zeros will be used to show that no quantity is authorized.

And, as with other allowances, if the item isn't authorized under METR, a report will show zeros for this allowance.

Guard and Reserve units report an item's Organization Equipment Guide (OEG), as published (by USACONARC for reserves and by the National Guard Bureau for the Guard units).

In event no OEG has been published, the quantity authorized for training

will be reported as the OEG quantity.

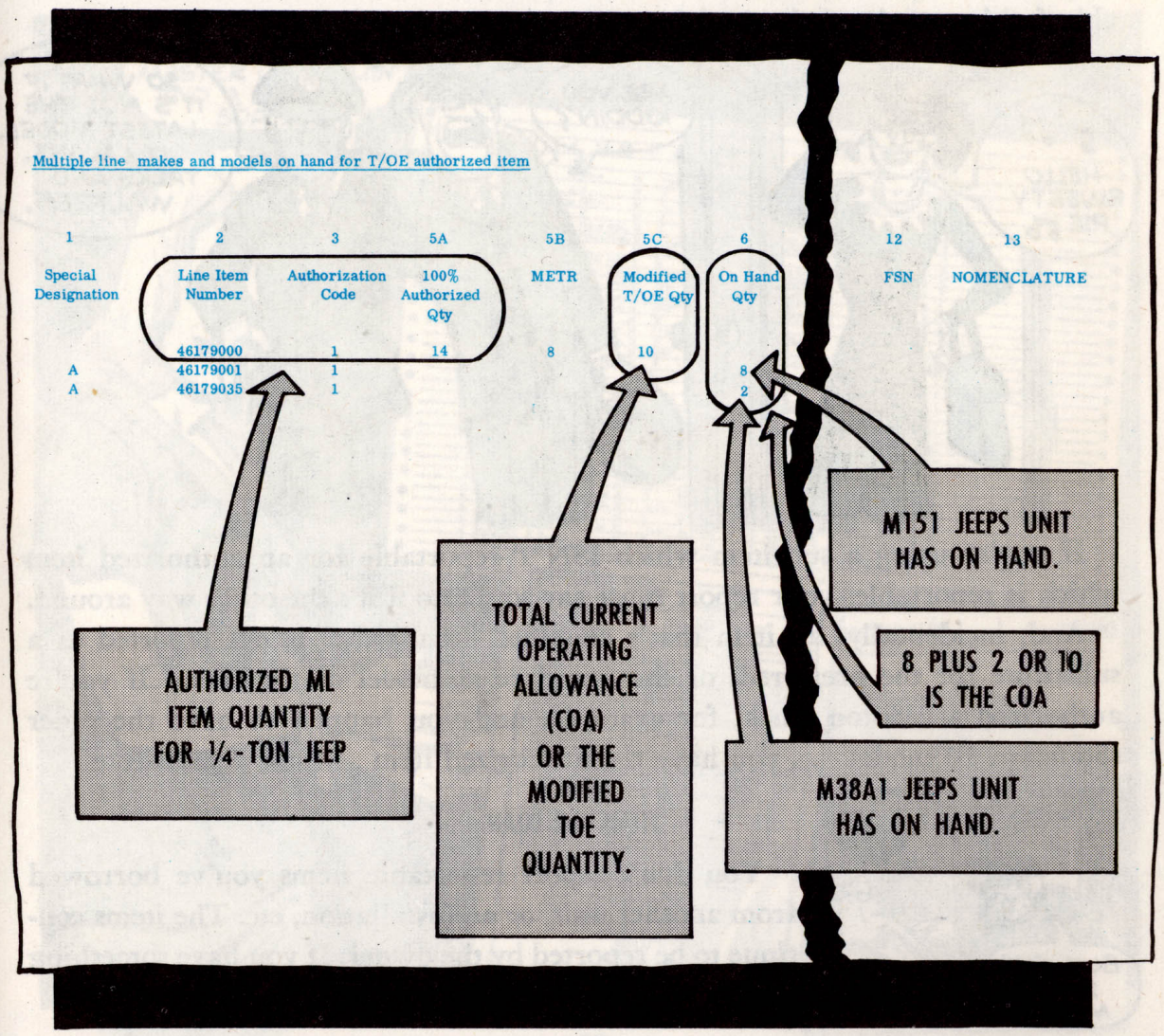
And, like with active Army units, if an item's actually authorized to be on hand under OEG or for training, the quantity will be reported. And, the quantity will be equal to or less than the 100 percent TOE or TA authorized quantity.

If the item's not authorized under OEG or for training, here, too, zeros will explain the lack of same on the report.

MULTIPLE LINE (ML) ITEM ALLOWANCES

You report your authorized allowances under the ML's generic (basic) LIN **only**. And, for the separate makes and models you have under the ML authorization you simply report the quantity on hand.

That is, your authorized allowance belongs with the ML LIN you report, because you have no exact authorized allowance for each specific make and model. You simply list the quantity on hand for each make and model in LIN sequence, and with FSN and nomenclature, directly under the ML item.



PS MORE

REPORTING DELETED ML'S

When you lose your authorized allowance for an ML item you report the deletion under the basic LIN for the ML item. Then you list the separate makes and models as "on-hand", "unauthorized". You continue to report the separate makes and models that way until they're turned-in and deleted from your property book.

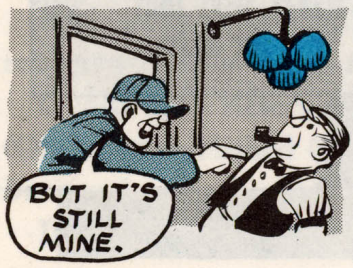
Back at the agency, you see, there's a separate card for each different LIN'd item your unit is authorized, or which you've reported. To get each item scratched off your unit's record you have to say you've given it up.

ON THE SUBS

You report substitute items by LIN, FSN, identification, quantity on-hand, etc., just like an authorized item. The report must say exactly what a substitute item is subbing for. And, remember, a sub item must be related in some reasonable fashion to the authorized item.

If you're using a sub item which ISN'T reportable for an authorized item which is reportable, your report must say so. Ditto if it's the other way around.

And, incidentally, an item that's classified Standard B is not reported as a substitute for the preferred, or the Standard A model of that item. If you're authorized a 2½-ton truck, for example, and you happen to have the older (Standard B) model . . . you have the authorized item . . . not a substitute.



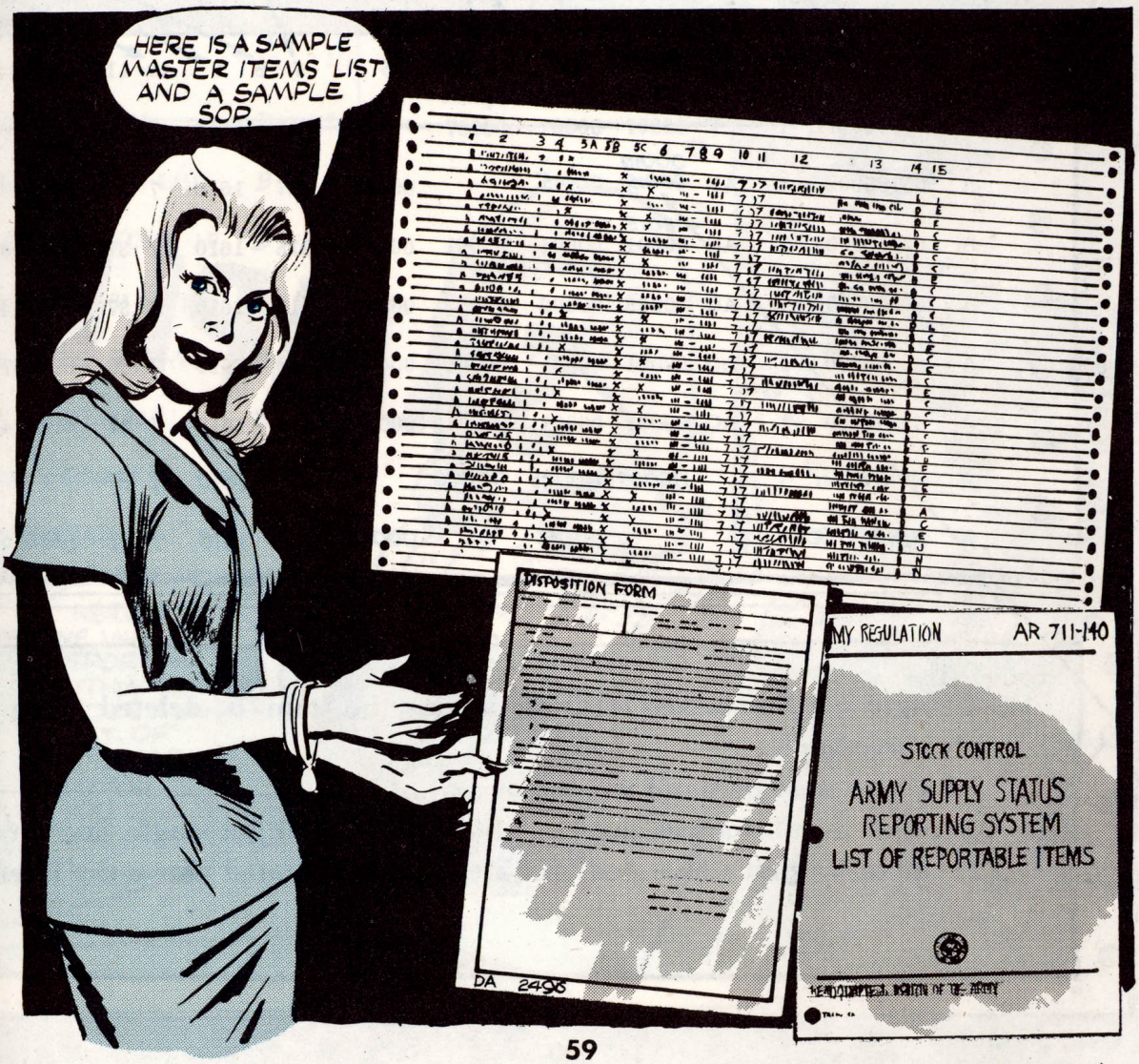
ITEMS ON LOAN

You don't report reportable items you've borrowed from another unit, or an installation, etc. The items continue to be reported by the owner. If you have something out on loan, of course, it remains on your report.

YOU'RE THE TRIGGER, MAN . . .

A report that starts out wrong at the unit can feed wrong supply scoop all the way up the supply line. It might take you and everybody else concerned a good spell to finally set the record straight . . . and, in the meantime, the original goof could lead a lot of people astray, mangle-up a lot of important supply decisions, transactions, and the like. And, before it's over it might even come back to hurt you in the form of shortages, overages, bottle-necks, and similar sad inconveniences.

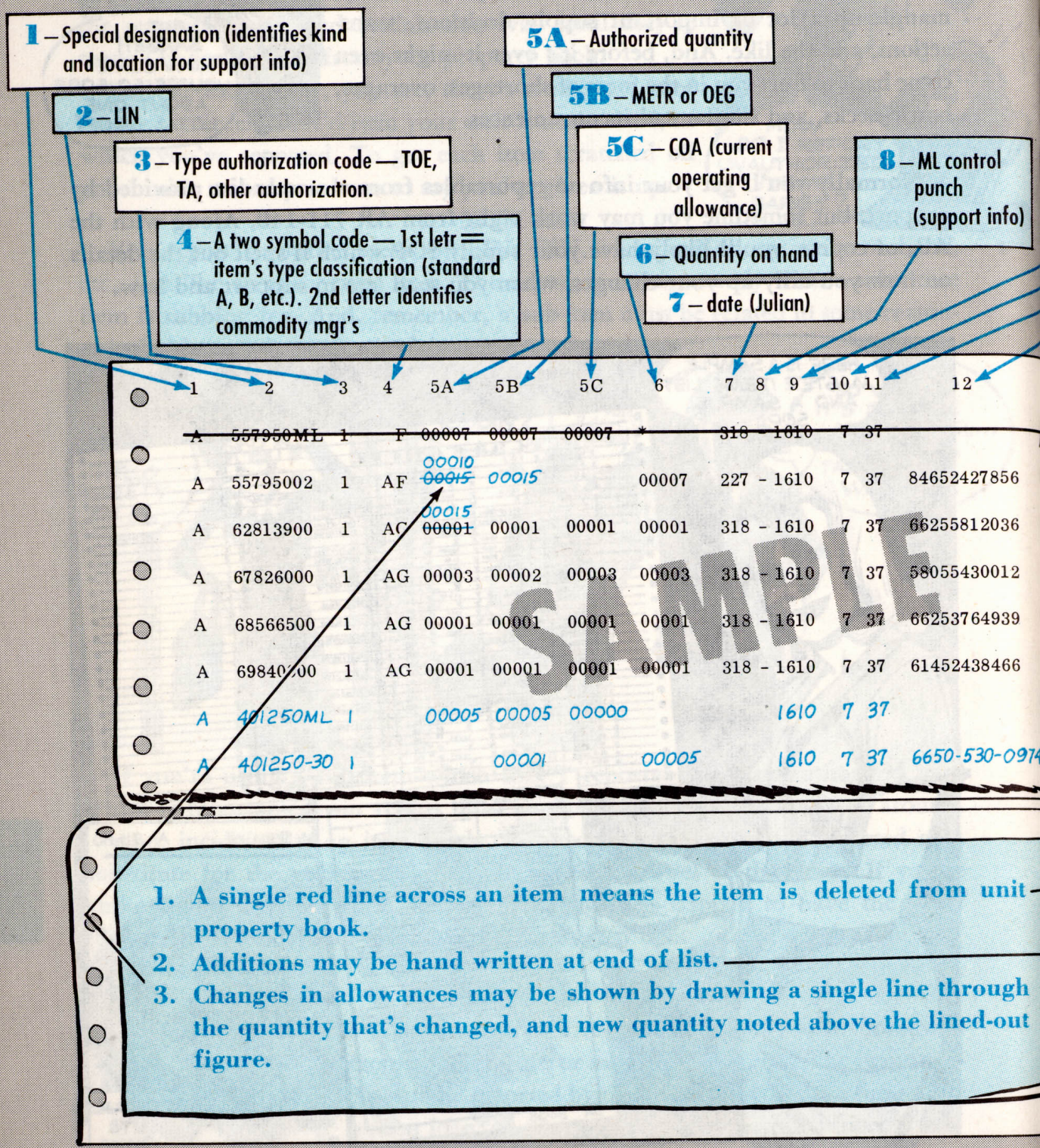
Normally you'll get your info on reportables from a master list provided by support, but sometime you may work right from AR 711-140. Along with the AR, of course, you'll likely have your supply SOP which'll spell out the details on how you tally-up your changes, when you send 'em to support and how.



PS MORE

KEEP A RUNNING SCORE

An easy way to keep your supply status info up-to-date and ready to report at any time, is to make the changes, as they occur, directly on your copy of the master item's list, or on a copy of your previous report which you get from support.



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1 – Special designation (identifies kind and location for support info)

2 – LIN

3 – Type authorization code — TOE, TA, other authorization.

4 – A two symbol code — 1st letr = item's type classification (standard A, B, etc.). 2nd letter identifies commodity mgr's

5A – Authorized quantity

5B – METR or OEG

5C – COA (current operating allowance)

6 – Quantity on hand

7 – date (Julian)

8 – ML control punch (support info)

9 – Processing code (support info)

10 – Type of Activity code (stateside, active Army, STRAF, ARSTRIKE, Reserve, Guard, overseas units, etc.)

11 – Installation code

12 – FSN

13 – Nomenclature

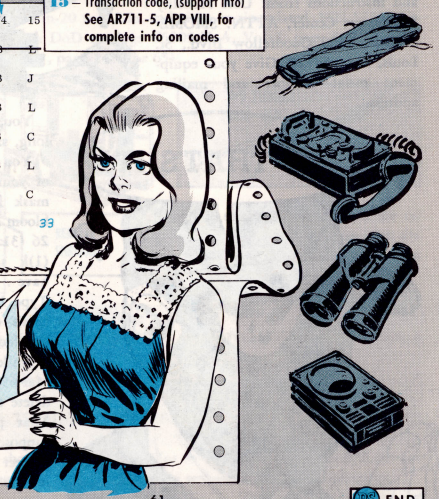
14 – DPU (data processing unit)

15 – Transaction code, (support info) **See AR711-5, APP VIII, for complete info on codes**

1	2	3	4	5A	5B	5C	6	7	8	9	10	11	12	13	14	15
~~A~~	~~55795ML~~	~~1~~	~~F~~	~~00007~~	~~00007~~	~~00007~~	*		318 - 1610	~~7~~	~~37~~			~~SLEEPING BAG MTN~~	~~B~~	~~L~~
A	55795002	1	AF	00010 ~~00015~~	00015		00007		227 - 1610	7	37		84652427856	SLEEPING BAG MTN LGE	B	J
A	62813900	1	AC	~~00001~~ 00015	00001	00001	00001		318 - 1610	7	37		66255812036	MULTIMETER AN/URM-10	B	L
A	67826000	1	AG	00003	00002	00003	00003		318 - 1610	7	37		58055430012	TELEPHONE TA-312/PT	B	C
A	68566500	1	AG	00001	00001	00001	00001		318 - 1610	7	37		66253764939	TST ST ELE TUBE TV-7	B	L
A	69840 00	1	AG	00001	00001	00001	00001		318 - 1610	7	37		61452438466	WD-1/TT ON RL-159/U	B	C
A	401250ML	1		00005	00005	00000			1610	7	37			BINOCULAR 7X50 MR		33
A	401250-30	1			00001		00005		1610	7	37		6650-530-0974	BINOCULAR M17A1		

SAMPLE

1. A single red line across an item means the item is deleted from unit property book.
2. Additions may be hand written at end of list.
3. Changes in allowances may be shown by drawing a single line through the quantity that's changed, and new quantity noted above the lined-out figure.



You make the changes on the listing just as you post 'em in your property book. That is, add the authorization code, authorized allowance, on-hand quantity, LIN, FSN, item description, etc., on whatever you gain. Or else line-out in red pencil the items you've lost.

SWEAT SAVER

And, last but not least, here's an important time-and-sweat-saving tip. When a LIN or FSN on your authorization document and in your property book disagree with the item's LIN or FSN in AR 711-140, your report takes the FSN and LIN which is provided by support from the item's master card file.

END

You make the changes on the listing just as you post 'em in your property book. That is, add the authorization code, authorized allowance, on-hand quantity, LIN, FSN, item description, etc., on whatever you gain. Or else line-out in red pencil the items you've lost.

9 – Processing code (support info)

10 – Type of Activity code (stateside, active Army, STRAF, ARSTRIKE, Reserve, Guard, overseas units, etc.)

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12 – FSN

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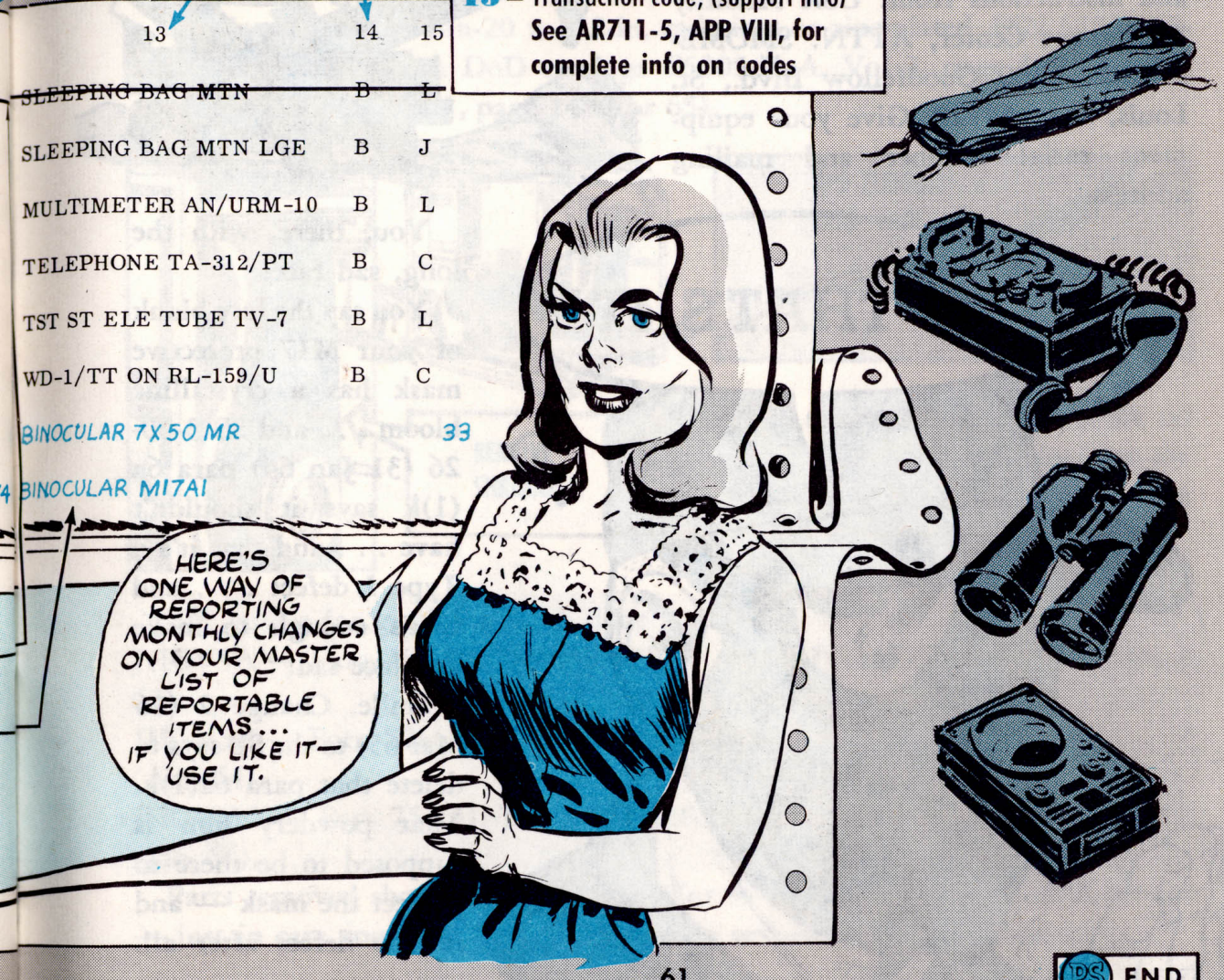
15 – Transaction code, (support info) **See AR711-5, APP VIII, for complete info on codes**

13	14	15
~~SLEEPING BAG MTN~~	~~B~~	~~L~~
SLEEPING BAG MTN LGE	B	J
MULTIMETER AN/URM-10	B	L
TELEPHONE TA-312/PT	B	C
TST ST ELE TUBE TV-7	B	L
WD-1/TT ON RL-159/U	B	C
BINOCULAR 7X50 MR		33
4 BINOCULAR M17A1		



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END

HI-LINE CAUTION PLATES

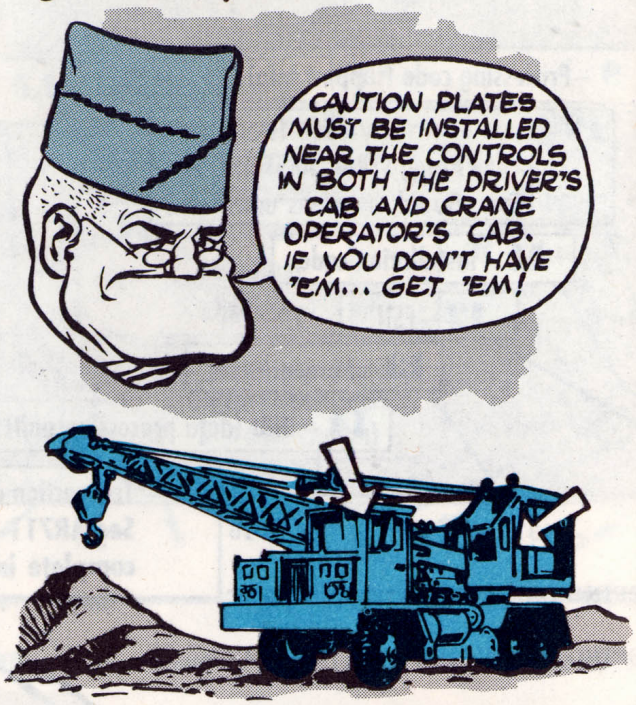
As you know, a high-tension line can kill you if your crane touches it.

Before you get within yelling distance of a high-tension power line with the American H&D 2360 or W2360 crane-shovel, better check to see if it has power line caution plates.

The identification plate at the front of the revolving crane frame will clue you.

Serial numbers GS5810W thru GS-6679W (Contract No. 88-3-49791-11) were issued without the hi-line caution plates. If you've got one of these, ask for caution plates with mounting screws and instructions from: USA Mobility Equipment Center, ATTN: SMOME-MEB-B, 4300 Goodfellow Blvd., St. Louis, Mo., 63120. Give your equipment serial number and mailing address.

So, until you get the caution plates, you'll have to keep reminding yourself of the high-line dangers. 'Course that's a good idea anytime.



You, there, with the long, sad face!

You say the face blank of your M17 protective mask has a crystalline bloom . . . and SB 3-30-26 (31 Jan 64) para 6a (1)k says it shouldn't have . . . and that it's a Type I defect . . . and that's enough to make any face sad!

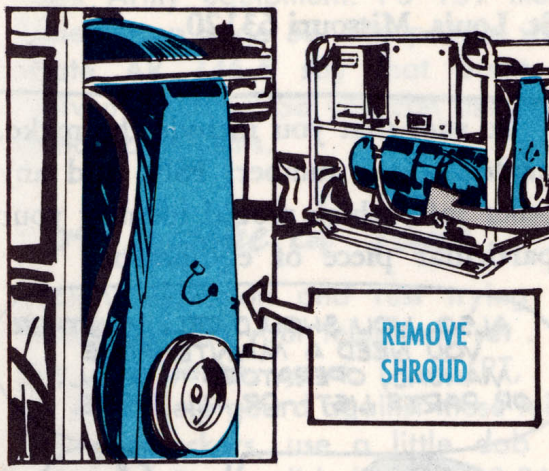
Smile. Change 2 (16 Mar 65) to the SB says to delete that para 6a(1)k. That powdery film is supposed to be there to protect the mask — and it's no defect after all.

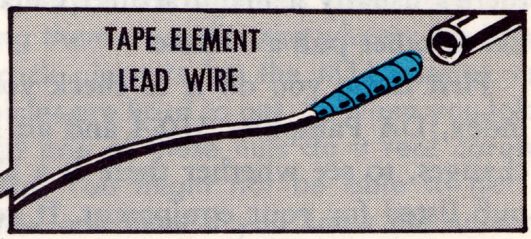
That gasp for breath from your Hollingsworth 3-KW generator could mean that it's overheated — even on a mild day. So, maybe it's time to take off the blanket that holds in the hot air.

There're three generator models that may overheat when the weather is above freezing (32°F) — the JHGV3A, JHGV3B and JHGW3C. And the cure is the same for each — take off its heat shroud.

After the heat shroud is removed, replace the screws that hold it with four new screws.

Use Screw, cap, 1/4-in-20 x 1/2-in, cadmium or zinc plated, FSN 5305-012-0628. They're listed in DoD catalogs C5305-IL-A, Vol 3, page 582 (Jul 65) and C5305-ML-A, Vol 1, page 14 (Apr 65).

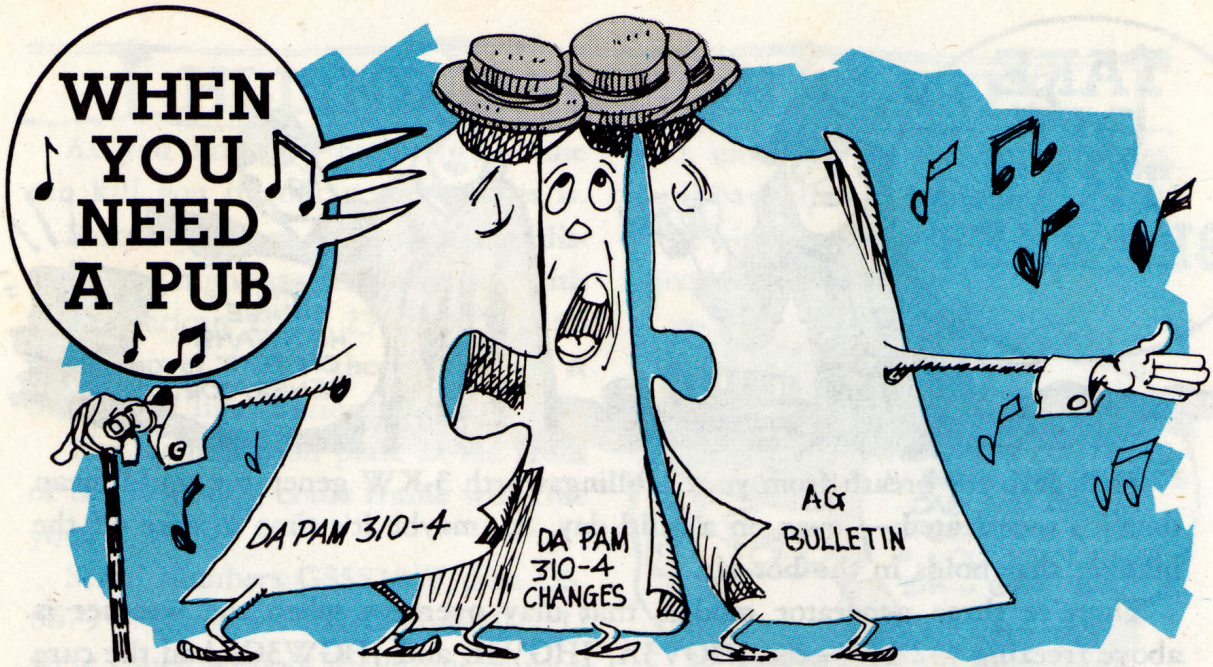




At the same time, disconnect the oil pan heating element lead wire from the connector — at the engine base — and wrap the end with tape.

TM guides for getting the job done are:
JHGV3A — Para 75a, TM 5-6115-327-15 (Jun 62) and Fig 4(13), -25P (Aug 62).
JHGV3B — Para 72a(1), TM 5-6115-298-15 (May 64) and Fig 5(8), -25P (Apr 64).
JHGW3C — Para 75a(1), TM 5-6115-282-15 (May 64) and Fig 7(7), -25P (Jan 64).

Parts removed should be kept handy for re-installation when and if needed — just in case you head for a cold country or have a cold winter coming.



You don't have to be a genius to learn the why and wherefores of getting pubs for your Engineer-type commercial equipment.

Every piece of equipment doesn't have a TM, LO, or parts manual, but there's usually a manufacturer's manual or other pub available.

First thing you do is to check your index, DA Pamphlet 310-4 and all its changes, to see whether there is a DA pub listed for your equipment. If you can't find one listed, then you check your AG Bulletin. In case you're not acquainted with it, the U. S. Army Publications Center at St. Louis, Mo. publishes a weekly AG Bulletin which tells what publications were given initial distribution the week before. They send out technical and supply pubs that are listed in your DA Pamphlet 310-4.

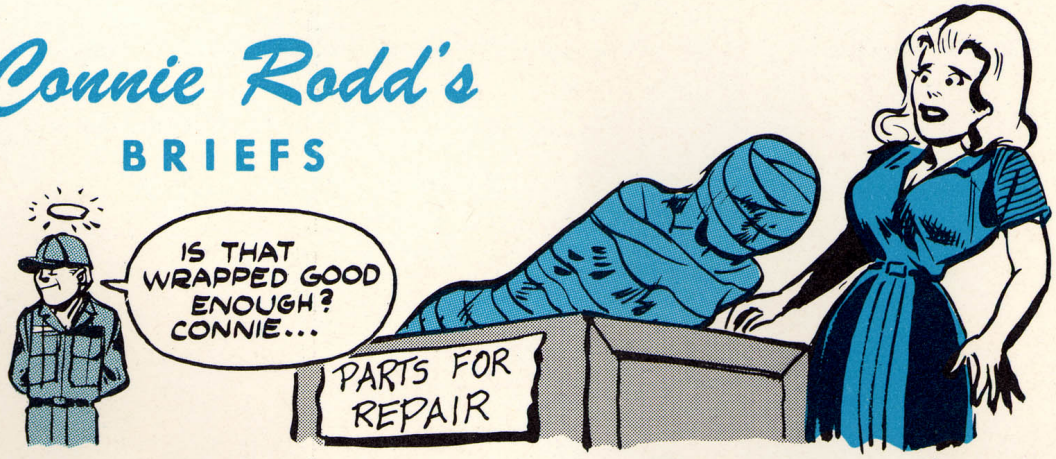
Once you've checked your bulletins (as far back as you can go) and you haven't found it there, then your next step is to ask for a manufacturer's publication.

You order it just like you would a repair part. Your support will then send your request to:

U. S. Army Mobility Equipment Center
ATTN: SMOME-STL-E
4300 Goodfellow Boulevard
St. Louis, Missouri 63120.

Be sure that you include the make, model, serial number, FSN, and any other info which would identify your particular piece of equipment.

Connie Rodd's BRIEFS



Never Use Gasoline

Some soldiers and their gear get burned up every now and then when somebody uses gasoline for cleaning.

You use gasoline as a fuel **only** . . . in engines, stoves and lanterns. Never use it for cleaning; any spark can set it off.

Forget about using gasoline, too, for that "gasoline-soluble" paint used to mark Army equipment. PS 151 mentioned it on page 57. The people who wrote AR 746-5 say that paint is "solvent-soluble." So you can use your standard solvents.

A Swipe in Time . . .

Light corrosion and rust trying to buddy up with your telephone set . . . like, f'rinstance, your TA-43/PT, or -312? To help guard against these telephone attackers, use a little dab of liquid furniture polish (FSN 7930-266-7121) on a clean cloth after wiping the outside of the set dry. Extra care is called for when using polish around terminals and switches. The quart-size polish is listed on page 109 in the GSA catalog, dated December 1964.

Oh, yes, if you're thinkin' of putting a shine on your telephone, forget it.

Perfection Igniter

Wondering how to get the igniter for your E510 Perfection Stove 60,000-BTU heater? It's in Parts Kit, Heater, FSN 2540-656-2315. The kits are at the depot.

Save M113 Carrier Track Pin Nuts

Maybe the squirrels have been storing them away for the winter. Anyhow, track pin nuts for the M113 series vehicles are hard to get. So when you take off one of these nuts do it real careful like. You might not be able to get a new one even if you know the nomenclature — which is nut, extended washer, double hexagon, part number 8756580, FSN 5310-655-9863.

No Training Packages

Those training packages on ESC and TAERS described on pages 28-29 of DA Pamphlet 750-6 were distributed to Field Army units long ago, and the U.S. Army Maintenance Board has none left. Check with your local command and when you locate copies make sure you update them to agree with current regulations.

Would You Stake Your Life *right now* on the Condition of Your Equipment?

PM PAYS

AR 672-5-1 GIVES THE DOPE ON HOW YOU CAN WIN THESE BADGES